R E P O R T   R E S U M E S

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DEVELOPMENT OF A PROGRAM FOR MENTALLY RETARDED CHILDREN IN RURAL SCHOOLS, 1958-1959.

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DESCRIPTORS- *RETARDED CHILDREN, MENTAL RETARDATION, *EDUCABLE MENTALLY HANDICAPPED, *SPECIAL EDUCATION, TEACHING METHODS, *RURAL SCHOOLS, ACADEMIC ACHIEVEMENT, STATE AID, INSERVICE TEACHER EDUCATION, SOCIAL DEVELOPMENT, STANFORD BINET TEST, CALIFORNIA TEST OF MENTAL MATURITY, AUGUSTA, MAINE, CALIFORNIA ACHIEVEMENT TEST, CORE ACHIEVEMENT TEST, ACHIEVEMENT RATING SCALE

THIS PROJECT WAS DEVELOPED TO SHOW WHAT EFFECT THE SERVICES OF A RESEARCH TEACHER FOR EDUCABLE MENTALLY RETARDED PUPILS 1 DAY A WEEK WOULD HAVE ON THE ACADEMIC ACHIEVEMENT AND SOCIAL MATURITY OF THESE CHILDREN AND TO DETERMINE IF SUCH A PROGRAM IS FINANCIALLY PRACTICABLE FOR RURAL COMMUNITIES. THE EFFECT OF SUCH A PROGRAM ON THE INSERVICE TRAINING OF REGULAR CLASSROOM TEACHERS WAS ALSO INVESTIGATED. PUPILS IN GRADES 1-8 IN 20 RURAL COMMUNITIES WERE GIVEN THE CALIFORNIA TEST OF MENTAL MATURITY AND 9 PERCENT OF THOSE TESTED APPEARED TO BE IN THE EDUCABLE MENTALLY RETARDED GROUP (50-75 IQ). THIS SMALLER GROUP WAS RETESTED USING THE STANFORD BINET TEST, FORM L, AND AS A RESULT 3.4 PERCENT OF THE ORIGINAL GROUP (APPROXIMATELY 90 STUDENTS) WERE CLASSIFIED AS EDUCABLE RETARDATES, CONFIRMING THEIR ELIGIBILITY FOR THE PROGRAM. THE COMMUNITIES WHERE THESE CHILDREN LIVED WERE DIVIDED IN HALF, ONE PART TO SERVE AS AN EXPERIMENTAL GROUP AND THE OTHER AS A CONTROL GROUP. TEACHERS WERE EMPLOYED TO SERVE THE FORMER GROUP 1 DAY A WEEK IN SPECIAL CLASSES AND TO HOLD CONFERENCES WITH REGULAR TEACHERS AND LEAVE MATERIALS WITH THEM FOR USE DURING THE REMAINDER OF THE SCHOOL WEEK. THE CONTROL GROUP HAD NO SPECIAL WORK. TEST SCORES OF THE SUBJECTS USING THE CALIFORNIA ACHIEVEMENT TEST, THE CORE ACHIEVEMENT TEST, AND THE ACHIEVEMENT RATING SCALE SHOWED SIGNIFICANT EXPERIMENTAL GROUP GAINS OVER THE CONTROL GROUP. FROM THE SUCCESSFUL RESULTS OF THIS PROJECT, A STATE PLAN WAS INITIATED PAYING 70 PERCENT OF SPECIAL TEACHER'S SALARY IN RURAL COMMUNITIES WITH FEWER THAN 300 PUPILS. IT WAS SUGGESTED THAT SIMILAR PROGRAMS BE SET UP IN OTHER RURAL AREAS TO VALIDATE THE FINDINGS OF THIS PROJECT. (JH)

Development of a Program for Mentally Retarded Children in Rural Schools

1958-1959

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State Department of Education

Augusta, Maine

September 1, 1959

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FOREWORD

Considerable effort has been expended in this project by many persons in locating the individuals for the project by means of group and individual tests; in the teaching of those who belonged to the educable mentally retarded group; and in the administration of the project. Satisfactory academic and social gains plus the knowledge that communities have been aroused to the need for more adequate opportunities for these children and a desire on the part of several communities to do something about it is very gratifying. The rewards gained far outweigh the time and effort involved.

During the period from April 15, 1958 through August 31, 1959, a total of approximately 42,832 miles have been traveled by the research teachers, group and individual testers, the project investigator, and the director and assistant director. This would mean approximately 595 miles per pupil for the 72 who completed the year with the research teachers.

Many State of Maine agencies have cooperated in helping the research teachers to have new and interesting materials for use with the educable mentally retarded pupils. In addition to the publishers listed in Appendix E, mention should be made of the Dairy Council, the Department of Inland Fisheries and Game, Forestry Department, Department of Sea and Shore Fisheries, Department of Economic Development, and the State Library.

Welfare Case Workers and District Nurses have added much to the information of the research teachers by filling in with background material concerning individuals, and being ready to assist when called upon by the staff to help in many different situations relating to the health and development of the children.

The preliminary testing by the group and individual testers — Mrs. Lancy Christie, Mrs. Helen Johnson, Mrs. Nettie Newcomb, Mrs. Lillian Randall, Mrs. Helen Reed, Mrs. Elsie Reilly, Miss Dorothy Babcock, and Walter Reed — helped pave the way for setting up the classes for the research teachers.

Dr. Romaine Mackie of the U. S. Office of Education gave very helpful suggestions and constructive criticisms on her visits near the beginning and end of the project. Dr. John R. Crawford and Dr. Frank W. Lathrop gave time as consultants, which was of value in helping to determine the content of the report.

The permission granted by Dr. J. Wayne Wrightstone, Director of Research, Cooperative Research Project, New York City, to adapt for rural use and to use the Core Achievement Tests developed by his staff, and similar permission given by Dr. William Itkin, Director Cooperative Research Project, Chicago Board of Education, to use the Adjustment Rating Scale developed by his staff added much to the measurements obtained through the project.

The California Test Bureau made available to research directors, guidance directors, and psychologists on a national scale a reprint of a brief article concerning the project which appeared in the January, 1959, issue of MAINE SCHOOLS. Newspapers have been generous in publicizing the project and this has helped to make it known statewide.

The school personnel and parents in the communities involved in the project cooperated in large measure to make the project successful. Typists in the early stages of the program included Mrs. Elizabeth Herrick, Mrs. Helen Hilton, and Mrs. Eleanor Mezzullo. In the closing months Mrs. Gertrude Dodge did most of the typing and Mrs. Phyllis Albee did much of the proof-reading.

Without the untiring efforts of the two research teachers, Mrs. Isabelle Bryant and Mrs. Helen W. Worcester, the project could not have produced the satisfactory results academically and socially plus the good public relations throughout the communities involved. After all, this is the heart of the project.

To these and to all others who in any way assisted, go my sincere thanks.

The patience and understanding extended to the project investigator by the Director, Philip A. Annas, and Assistant Director, Miss Manon B. Smith, are deeply appreciated.

Ruth L. Pennell
Project Investigator

Development of a Program for Educable Mentally Retarded Children in Rural Areas

PART I

THE PROBLEM

The research reported herein was performed pursuant to a contract with the United States Office of Education, Department of Health, Education and Welfare. As a result of a conference with Dr. Walter Adamson, Senior Research Coordinator, Research and Statistical Services Branch of the U. S. Office of Education, the contract was signed on March 27, 1958, by Dr. Warren G. Hill, Commissioner of Education, State of Maine. Mr. Philip A. Annas served as director of this research; Miss Manon B. Smith as assistant director; and the writer as project investigator.

Purpose

The purpose of this special project was to show what effect the services of a research teacher for educable mentally retarded pupils, one day a week, would have on the academic achievement of these children. Would it affect the social maturity of these children? What effect would this program have on the in-service training of the regular classroom teachers? Is such a program financially practicable in rural areas?[1]

Definitions

Central Area refers to the ten towns in the project which lie in the central section of Maine. It includes five control communities and five experimental communities.

Community is used synonymously with the word " town."

Control Area refers to the ten towns which did not have any teaching other than that of the regular classroom teacher. Five towns were in the western section of Maine and five in the central section.

Educable Mentally Retarded refers to children with IQ's between 50 and 75 inclusive as measured by the Revised Stanford-Binet.

Experimental Area refers to the ten towns in the project, each of which had the services of a research teacher one day a week. Five towns were in the western section of Maine and five in the central section.

List of Abbreviations

acad. = academic
activs. = activities
adj. = adjustment
ads. = advantages
arith. = arithmetic
av. or aver. = average (mean)
batt. = battery
CAT = California Achievement Test
cent. = central
comp. = comprehension
cont. = control
CTMM = California Test of Mental Maturity
disads. = disadvantages
elem. = elementary
emot. = emotional
Eng. = English
exper. = experimental
funds. = fundamentals
indiv. = individual
inter. = intermediate
I.Q. or IQ = intelligence quotient
Jr. H.S. = Junior High School
lang. = language
L P = lower primary
mdn. = median
mechs. = mechanics
read. = reading
reas. = reasoning
S-B = Stanford-Binet
soc. = social
spell. = spelling
tot. = total
U P = upper primary
vocab. = vocabulary
west. = western
C-C = central control
C-E = central experimental
W-C = western control
W-E = western experimental

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[1] Appendix A

PART II

PLANNING, ORGANIZING AND EXECUTING THE PROJECT

Planning and Organization — Selection of Participating Communities

All towns having a school population between 100 and 300 children were considered for such teaching. One hundred eighty-six communities were found to be eligible. Letters were sent to the eighty-one superintendents having supervision of these towns, explaining the special project and requesting a reply by April 21, 1958, indicating whether, after consultation with their school boards, they wished to participate in this project and whether a room was available for a special class.[1] Results of this survey showed that 110 communities (64%) were interested in participating and that 60 of these communities (55%) had rooms available for the project.

Then came the task of deciding on the twenty communities to be included. In addition to having a suitable population and rooms where needed, a check was made of the training of the teachers so that experimental and control groups could be started on as nearly an equal basis as possible. In a state where communities are widely separated, geographic location was an important consideration.

When the towns were checked there were two very comparable groups of ten towns each in the western section of the state and in the central region. In addition to the factors of the number of teachers, the number of pupils per teacher, and the training of the teachers being approximately the same, it was found that the average age and average salary of teachers were comparable in the control and experimental areas.

Plan of Program

The ten communities selected as experimental areas were to have two research teachers trained and experienced in work with the educable mentally retarded one day a week. These teachers would confer with the regular teachers of the pupils involved and help coordinate the program of instruction for each child, leaving work for the other four days of the week. To qualify for the program a pupil had to have an intelligence quotient in the range of 50 to 75 as measured by the Stanford-Binet. The number in a special class was limited to five with one exception. The ten communities serving as control areas were to have only the services of the regular teachers and no access to any special materials used.

Table I
Comparison of Areas Selected for Program
(1957-1958)

	No. Teachers	No. Pupils	Average No. Pupils	Average Salary	Av. yrs. Training	Av. Age Teachers
Control areas	50	1294	25.9	$2695.50	2.2	48.0
Experimental areas	52	1391	26.8	2745.19	2.3	45.4

The actual group involved in 1958-59 was as follows:

Table II
Comparison of Areas in Program
(1958-1959)

	No. Teachers	No. Pupils	Average No. Pupils	Average Salary	Av. yrs. Training	Av. Age Teachers
Control areas	50	1328	26.6	$3007.17	2.3	45.7
Experimental areas	53	1421	26.8	3133.02	2.3	47.5

Testing — Group Mental Ability Testing

Prior to testing, conferences were held with Dr. John Crawford and Dr. Frank Lathrop who are furnishing consultant service for this project. Six persons trained in group testing (Mrs. Lancy Christie, Newport; Mrs. Helen Johnson, Penobscot; Mrs. Nettie Newcomb, Carmel; Mrs. Lillian Randall, Freeport; Mrs. Helen Reed, Lewiston; Mrs. Elsie Reilly, New Harbor) administered the California Test of Mental Maturity (CTMM) in May and the first week of June, 1958. Several pupils were absent so the testing had to be finished in September when schools reopened. This brought the number of pupils tested to 2632. Later testing raised this to 2800. (See Individual testing)

Results on the CTMM revealed that the groups had similar ability.

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[1] Appendix B

Table III

Median Intelligence Quotients of Pupils in Control and Experimental Groups
Based on the Use of the California Test of Mental Maturity

LANGUAGE

GRADES

	One		Two		Three		Four		Five		Six		Seven		Eight		All Grades	
	No.	I.Q.	No.	I.Q.	No.	I.Q.	No.	I.Q.	No.	I.Q.	No.	I.Q.	No.	I.Q.	No.	I.Q.	No.	I.Q.
Western Area																		
Five Control Groups	87	109	98	105	73	100	89	107	100	108	72	107	70	101	80	96	669	104
Five Experimental Groups	97	103	81	104	89	102	74	108	103	102	89	100	72	100	67	97	672	101
Central Area																		
Five Control Groups	59	104	85	106	83	105	81	103	81	103	59	100	46	96	57	93	551	101
Five Experimental Groups	81	108	98	103	74	101	79	103	102	104	83	98	85	93	76	90	678	102
All Communities																		
Ten Control Groups	146	107	183	105	156	103	170	105	181	106	131	103	116	100	137	94	1220	103
Ten Experimental Groups	178	106	179	104	163	101	153	105	205	103	172	99	157	96	143	93	1350	102

Table IV

Median Intelligence Quotients of Pupils in Control and Experimental Groups
Based on the Use of the California Test of Mental Maturity

NON-LANGUAGE

GRADES

	One		Two		Three		Four		Five		Six		Seven		Eight		All Grades	
	No.	I.Q.	No.	I.Q.	No.	I.Q.	No.	I.Q.	No.	I.Q.	No.	I.Q.	No.	I.Q.	No.	I.Q.	No.	I.Q.
Western Area																		
Five Control Groups	87	106	98	105	73	104	89	109	100	109	72	104	70	92	80	94	669	103
Five Experimental Groups	97	108	81	98	89	97	74	105	103	100	89	99	72	91	67	95	672	99
Central Area																		
Five Control Groups	59	103	85	101	83	103	81	101	81	97	59	97	46	99	57	97	551	99
Five Experimental Groups	81	106	98	98	74	98	79	102	102	103	83	97	85	94	76	93	678	99
All Communities																		
Ten Control Groups	146	104	183	103	156	103	170	104	181	105	131	99	116	94	137	95	1220	101
Ten Experimental Groups	178	108	179	98	163	98	153	103	205	101	172	98	157	92	143	94	1350	99

Table V

Median Intelligence Quotients of Pupils in Control and Experimental Groups
Based on the Use of the California Test of Mental Maturity

TOTAL I.Q.

GRADES

	One		Two		Three		Four		Five		Six		Seven		Eight		All Grades	
	No.	I.Q.	No.	I.Q.	No.	I.Q.	No.	I.Q.	No.	I.Q.	No.	I.Q.	No.	I.Q.	No.	I.Q.	No.	I.Q.
Western Area																		
Five Control Groups	87	108	98	105	73	103	89	108	100	108	72	104	70	98	80	95	669	104
Five Experimental Groups	97	106	81	102	89	97	74	105	103	101	89	98	72	94	67	97	672	100
Central Area																		
Five Control Groups	59	102	85	103	83	104	81	102	81	100	59	98	46	99	57	94	551	101
Five Experimental Groups	81	106	98	101	74	99	79	102	102	102	83	98	85	93	76	93	678	100
All Communities																		
Ten Control Groups	146	105	183	104	156	103	170	105	181	105	131	101	116	98	137	95	1220	102
Ten Experimental Groups	178	107	179	102	163	98	153	103	205	102	172	98	157	94	143	95	1350	100

Table VI

Median I Q's
on
California Test of Mental Maturity

	Control Areas	Experimental Areas	20 Communities
Language I Q	103	102	102
Non-language I Q	101	99	100
Total I Q	102	100	101

Table VII

Percentile Rank Medians
on
California Test of Mental Maturity

	Control Areas	Experimental Areas	20 Communities
Memory	60	50	50
Spatial Relationships	50	50	50
Logical Reasoning	60	50	50
Numerical Reasoning	50	50	50
Verbal Concepts	50	50	50
Language	50	50	50
Non-language	50	50	50
Total	50	50	50

Of this group of 2632, two hundred thirty-seven or 9.0% seemed to qualify for the program outlined — intelligence quotient in the range of 50 to 75 on the language section, non-language section, or total test. Eight and three-tenths per cent were in the control areas and nine and six-tenths per cent in the experimental areas.

Individual Testing

During the summer and early fall of 1958 two hundred thirty-nine **Revised** Stanford-Binet Intelligence Tests, Form L, were administered by three individuals certified in Binet testing. These were Miss Dorothy Babcock, Garland Street Junior High School, *Bangor*; *Mr. Walter Reed, Farmington High School, Farmington*; and the writer. These tests were administered to pupils who had IQ's in the range of 50-75 on the language section, the non-language section, or the total battery of the CTMM.

In one of the twenty communities it looked as though there would be no one eligible for a special class, so another town was tested with the CTMM, adding 168 to the previous 2632 and a grand total of 2800. Eighteen of the Revised Stanford-Binets were administered in that community on the basis of the CTMM results and three were done by special request. Nineteen children in the original twenty communities were unable to be tested due to moving during the summer and early fall.

Three and three-fourths per cent of the original twenty communities proved to be eligible for the program. This figure was the same for both the control and experimental groups. In the additional community the figure was 2.4%. This community was not needed for the research but has been given all the testing which the other communities have received. The number of educable mentally retarded children eligible to start the program in September, 1958, was 89; 41 in the control areas and 48 in the experimental areas — or 3.4%. The consent of the parents was obtained before a pupil was placed in a special class in the experimental communities.[1]

Comparison of results on the CTMM and the S-B

Of the 234 testees for whom we had results on both tests, 69 lost on the S-B as compared with the CTMM; 5 showed no change, and 160 gained on the S-B as compared with the CTMM.

For those with lower IQ's on the S-B than on the CTMM the range was 1 to 24 points with an average of 8 points.

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[1] **Appendix C**

For those with higher IQ's on the S-B than on the CTMM the range was 1 to 41 points with an average of 14 points.

Gained on S-B I Q's	No. of pupils		No. of pupils	Lost on S-B I Q's	No. of pupils
1	8	22	4	1	8
2	6	23	7	2	9
3	10	24	3	3	8
4	7	25	3	4	3
5	8	26	4	5	4
6	8	27	1	6	4
7	7	28	2	7	3
8	2	29	2	8	6
9	6	30	1	9	1
10	6	31	2	10	4
11	6	32	1	11	1
12	5	33	2	12	3
13	7	34	2	13	3
14	6	37	1	14	3
15	6	38	1	15	1
16	4	41	1	17	1
17	6			18	2
18	4		160	19	2
19	5			20	1
20	1			21	1
21	5			24	1
					69

Results for those who completed the Special Project (70)* were as follows:

Table VIII

Comparison of Results on the CTMM and the S-B

	Gained on S-B IQ	Change	Lost on S-B IQ	Range	Average No. of Points of Change
Western Control (11)*	3		8	Gain 2-7 Loss 4-18	Gain 5 Loss 9
Western Experimental (13)	5		8	Gain 1-11 Loss 2-8	Gain 5 Loss 4
Total Western Area (24)	8		16	Gain 1-11 Loss 2-18	Gain 5 Loss 6
Central Control (22)	7	2	13	Gain 2-8 Loss 2-19	Gain 5 Loss 9
Central Experimental (24)	6	1	17	Gain 1-11 Loss 1-24	Gain 3 Loss 8
Total Central Area (46)	13	3	30	Gain 1-11 Loss 1-24	Gain 4 Loss 9
10 Control Towns (33)*	10	2	21	Gain 2-8 Loss 2-19	Gain 5 Loss 9
10 Experimental Towns (37)	11	1	25	Gain 1-11 Loss 1-24	Gain 4 Loss 7
All 20 Towns (70)	21	3	46	Gain 1-11 Loss 1-24	Gain 4 Loss 8

*** This is two less than the number in the project. They entered in September, 1958, and were only given the STANFORD-BINET.**

It would seem from these results that when a pupil scores 75 or less on the CTMM his chances of actually being in that category are one in three. In other words, two-thirds of those who scored low on the CTMM scored higher than that on an individual testing with the S-B.

Of those who are actually retarded, two out of three had lower scores on the S-B than on the CTMM. Those who made gains on the S-B over the CTMM IQ's made gains which were insufficient to carry them over the 75 IQ point.

For the mentally retarded, a group test may not be used as a final measure of ability. It may, however, serve as a screening test and thus decrease the number of individual tests to be administered.

After the individual Stanford-Binet tests were administered, home visits were made by the project investigator insofar as time permitted prior to the opening of schools in September. This helped to prepare the parents for the consent slips which were sent through the superintendents of schools. Usually through conversation a parent would tell things which indicated that they felt the progress of the child was not just as had been expected. Then the investigator was able to speak of varying rates of progress for different children; the help which might be given through the efforts of a research teacher one day a week; and the eligibility of the individual child for such special help.

This visit quite often gave additional information relative to childhood diseases, or special incidents which might affect progress.

During the course of the year visits to the experimental areas were made by the director, assistant director, and the project investigator. One of these visits brought forth the idea of giving the children the benefit of the Music TV program which was conducted in the State of Maine by the Department of Education. This meant that two days a week children in at least two communities were able to have the unexpected advantage of music appreciation. In the western experimental area this was not possible due to poor TV reception.

Four cases were presented to the research teacher in one area during the course of the year, involving children not in the program, but showing traits which seemed to indicate mental retardation. In one of these cases the parent solicited help for a pre-schooler. This is good evidence of the interest which showed itself in the community.

Many requests for speaking engagements during the year came to the staff involved in the project.

Execution of Plans — Research Teachers

The choice of teachers to do the special teaching was highly important. Mrs. Isabelle Bryant, B.S. in Ed., who had taught special classes in Bath, Maine, for several years was selected to teach the experimental classes in the Central area. She resigned from her position in Bath to undertake this one-year appointment. She has signed a contract for the next school year to serve as principal of a three-teacher school for special classes in Auburn, Maine.

Mrs. Helen Worcester, special class teacher in Orono, Maine, was selected to teach the experimental classes in the Western area. She asked for a leave of absence which was granted. In September she will return to her former position.

Both teachers have given unstintingly of their services. Forty-hour weeks would seem light to them after the hours spent on the project.

An indoctrination period of two weeks for the research teachers was held prior to the opening of schools. During this time general and specific initial plans were made. A successful experiment would indicate among other things the advantage of having in the rural area an itinerant teacher who would travel from town to town; spend one day a week in each of five towns teaching the educable mentally retarded children; help the regular classroom teacher; plan suitable materials and procedures for the other days; consult with parents; and help the community become aware of the problems concerning educable mentally retarded children and a possible solution for individual pupils.

Because of the difficulty of measuring such abstract qualities as emotional stability, social awareness and personality adjustment, it was realized that more stress would probably be given to developing academic skills than might be the case in an established program for teaching educable mentally retarded children.

A thorough study was previously made of the results of the testing and evaluations made accordingly. A study was also made of the communities chosen for the experiment. This included types of occupations, number of people employed in agriculture, and a survey of local industries.

Part of the orientation period was spent by the itinerant research teachers visiting the rural towns of their designated area and locating the schoolhouses and future special classrooms.

If school superintendents were holding preliminary meetings with principals and teachers, or workshops were being held at this particular time, the research teachers made plans to attend such functions. This gave an excellent opportunity to meet and greet the personnel with whom they would be working, and to glean important knowledge of the varied policies of the school systems.

Letters were sent to several publishers requesting assistance in obtaining material for use with the special classes.[1] The response was most gratifying and materials came in quite rapidly so that their use was available very near the beginning of the program in the schools.[2] The research teachers planned that pupils would not use the same materials on which they had previously met failure. The bright new materials were so attractive that the special classes which were planned for five pupils could readily have been taken over by an influx of many more interested pupils.

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[1] Appendix D

[2] Appendix E

This period also provided a good opportunity to check the suitability of the rooms and to check requested special working materials and supplies. Superintendents had received earlier a list of supplies to be available for the special class rooms.[1]

A discussion of the year's work was possible with the individual classroom teachers so that, insofar as possible, the plans for the work with the retarded children within her grade would coincide with those of the research teacher.

At last the teachers were practically ready to select the textbooks, supplementary books, devices and games, establish a library corner and work and play areas that would suffice for the " get acquainted " part of the first few days. Next the rooms were decorated and arranged to make them as pleasant and workable as means and supplies permitted. Thus each classroom for these newly organized rural special classes was made ready for the opening day, when these mentally retarded rural children would, for the first time, enter a special class to work with a research teacher.

It was found that the problem of classroom space was as acute in rural as in urban areas, and the problem was solved in various ways. One school assigned space in the cafeteria-auditorium. Here the stage was transformed into a very satisfactory miniature schoolroom to accommodate the pupils and teacher. It was equipped with a teacher's desk, movable pupil desks, a blackboard, and a record player.

Another system vacated the teachers' room and here a very satisfactory classroom was arranged with five movable pupil desks and chairs, a teacher's desk, a blackboard, and storage space. Kitchen and gymnasium facilities were available at scheduled hours. Audio-visual aids and a record player were also available as was space in the office for storage of confidential records. Here a good health program could be carried out as well as experiments in family activities.

Three communities provided facilities apart from the school buildings. In one case a women's civic organization donated its clubroom, which was spacious enough to provide several activity centers, with kitchen facilities at hand.

In another, a local business office was vacated for one day each week. Two double stationary pupils' desks and a blackboard were brought in and a large table and desk made available.

Still another community gave up its Civil Defense room for use as a classroom for its special class. This was a former school building. Therefore, an excellent room was available. It was pleasant, spacious, well lighted and heated, and well equipped with movable pupil desks, work tables for general and individual use. Also available was a spun glass screen for slides and a locker for confidential records.

In nearly all cases communities concerned were very cooperative in providing as much material and equipment as their respective finances would allow. This varied from school to school for regular classes as well as for the special class. Any lack in this direction was more than compensated for by complimentary materials from publishers and supply houses interested in helping with the experiment.

The most important aspect in any work concerning children is the child himself. Because of the relatively few times these children would meet with the research teacher it was important to study the individual child and arrange a program best suited to his needs as early as possible.

The variety and types of emotional, social, and academic problems were in almost direct ratio to the number of parents, homes, teachers, and individuals in the classes, and presented much the same problems as special class teaching in urban areas; the exceptions being the extreme isolation of some families with the attendant lack of experience outside the home. Some children lived on back roads which became impassable in wet weather and to whom " going to town " was a major undertaking.

Another interesting aspect in the study of the individual child was acceptance by his peer group. This varied from school to school and was felt to be a reflection of teacher attitude as well as parent and/or community attitude. Some of these pupils were shunned by teacher and schoolmates and were also looked down upon by the community as social misfits. Another factor in acceptance was felt to be directly traceable to the isolated living mentioned above. Some of these children had almost no contact with other children except at school, and where there was an only child or the child was the oldest sibling of a small family, the peer acceptance was poor. This was also true when one or both parents were middle-aged or older. The greatest peer acceptance was found with children living in less isolated homes or in large families.

Conferences with public health nurses in the various communities proved to be very beneficial, both in the understanding of the pupils' needs and in calling to the attention of the nurse health situations of individuals.

Conferences with parents at the very beginning of the school year and at frequent intervals throughout the year brought about a broader and better understanding between the parents and the regular and research teachers. It helped many parents realize the potentials of their mentally retarded child. Thus this new insight led them to a better understanding of how to cope with the problems that they face now and will face in the future.

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[1] **Appendix F**

The regular teachers often used the noon hour for discussions, exchange of ideas and problems, making plans for the remainder of the week, since the research teacher was there only one day weekly. After dismissal was another period for planning schedules or courses of study in cooperation with research teachers. This one special day was looked forward to by most of these rural teachers as the social highlight of the entire week. It was a morale booster.

General Daily Schedule

As schools closed at different times in the various communities due to bus schedules, two samples follow of schedules used by the two research teachers.

Schools With Hours 8:30 a.m. — 3:00 p.m.

8:30 — 9:00 **Opening Exercises**

Flag salute, poetry and songs or story, within keeping of season; one that correlates with present unit of work; that gets across a needed lesson in etiquette, or one bringing out traits in character training; occasionally having a, " I'd like to tell my classmates something " or " I have something to show you "; closing with the Lord's Prayer. Always ask one of the children to lead the salute and prayer. (Never force them; they gradually volunteer.)

9:00 — 10:00 **Reading**

The first few minutes is review of previous week's lesson. This is called " In Memory Lane." If the need for repeating is evident, do not use the same games or devices. Try to present the entire lesson with a new approach. It was not too often this procedure occurred. Do not state that following the review there will be a new lesson. Lead them into it as, " Now let us see how our lesson can be used this way." This avoids nervous tension, etc. New work may be either on blackboard, in ditto form, pictures to be studied, or in some concrete form. Keep explanations simple yet thorough, each pupil doing a sample to make certain that there are no misunderstandings. Each child does his follow-up work independently. Correction followed with all help possible when errors were found. This pattern is very helpful to the entire class as they will listen with interest to all taking part.

Cleaning up time, bathroom, drinks — making ready for morning recess, about 5-10 minutes, depending upon size of class, etc.

10:15 — 10:30 (Recess outside, weather permitting; free play)
5 or 10 minutes for settling down time.

10:30 — 10:55 **Arithmetic**

Assignments given out to advanced groups, either via written or oral instructions. Individual help if needed. Take groups to respective work areas as demand for instruction becomes apparent. Techniques of arithmetic follow much the same as those of reading. At close of this lesson children are asked to stand, stretch, get drinks, go to bathroom, look out of window, etc. About 5 minutes here.

11:00 — 11:20 **Music or Art Appreciation**

This is in the form of playing records, piano, musical games, rhythm band, choral singing, and dancing.

Art — study of some appropriate famous paintings, appreciation of color and form. Interior decorating, landscaping (within keeping of the social level of pupils' homes and the community). Class is always encouraged to bring material from home. Time here for each one to express himself fully via water colors, crayons, and finger painting, paper cutting and tearing, stick and circle drawing. Many pupils realized for the first time relaxation and pleasure through this medium. It brings to light many of their emotional problems, abilities, likes, and dislikes — teaches them to look, find, and see the beauty around them. Leaves them in good mood to enjoy their dinner. 5 minutes for clear up (maybe more)

11:25 — 11:40 Making themselves neat and clean before appearing in cafeteria. At this time review social graces to be practiced in the dining room. Playground activities with regular class. Teacher on playground duty.

12:30 — 12:45 Drinks, bathroom privileges, " pretty-up-time." Again make personal appearances neat. Get comfortable, then enjoy lullaby music or a story that is not excitable.

12:45 — 1:00 **Speech**

This includes exercises to develop and improve muscles and joints controlling the skills to better habits of speech. Practice in choral speaking to improve self confidence in oral speaking and reading, learning to cooperate with others and many other factors such as poise, quality of voice, etc. They realized pleasure and gained knowledge as they listened to speech records by Bremmer and Michaelson.

1:00 — 1:25 **Individual Reading**

This is self explanatory. At this time the other pupils are allowed to choose something to keep them busy, such as sitting with others at reading table, reading, looking at good magazines (brought in by pupils), game table, painting at easel, building with logs or blocks, sewing, and weaving. Each area is constructive pleasure, improving coordination, and learning to help and share with others. Following each individual lesson the child is given specific work to do that will entail following written or oral instruction. A few minutes needed for pick-up time.

1:30 — 1:50 **Science and Health**

Study in this series deals mostly with personal hygiene, proper food and rest habits, family togetherness, geographic and scientific causes and sources of our clothing and food, utilities necessary for better homes, healthier and happier people, thus better communities in which to live.

1:50 — 2:10 **Spelling, Language, and Writing**

These three studies covered much. Follow textbooks, mixing in material to cover needs to help them in the social and business world such as their future may hold.

2:10 — 2:30 **Physical Education and Safety**

Physical exercises to improve posture — learn fundamental safety rules of traffic, prevention of fire and home accidents. What to do in emergencies of sickness or accidents.

2:30 — 3:00 **Social Studies**

Principal unit has been the study of our State of Maine — using large colorful maps supplied by the Department of Economic Development, materials from the Department of Inland Fisheries and Game, table mats prepared by Maine AAA, to alert these youngsters to the available natural resources in our state.

Classes made murals, maps, articles for decorative use at home, planting and conservation.

In learning to live in our neighborhood, the following details were studied: the meaning and value of a municipal building; some details of town, state, and national government; types of work to ensure self-support and independence according to individual health and ability. For flavor, sprinkle with historic stories of the life of our forefathers, and geographic changes that time has brought to our country.

Schools With Hours 8:30 a.m. — 2:30 p.m.
(In all cases time blocks are flexible)

8:30 — 9:00 **Morning Exercises**

Psalm — Prayer — Flag salute. Children alternated in leading exercises and were allowed to follow teacher's pattern or plan different exercises. (Some children were shy and didn't want to be leaders but volunteered later in the year.) Health check followed with a discussion of important health habits, and comments on children's appearance, when favorable. (Comments on cleanliness were impersonal since some came from homes where facilities were lacking.) Special praise was given when improvements were made. Planning Period included special plans such as writing " thank you " notes at Christmas, planning art lessons, preview of TV music lesson, plans for field trips, making experience charts, etc. (Long range planning included at least one special activity a week.)

9:00 — 10:00 **Reading**

Group I. **Readiness**

This included work with manuscript letters, alphabet games using initial and final consonants, etc. This was followed by seat work papers, matching same consonant words, matching initial or final consonants to pictures.

Group II. **Primary**

Board work drill introduced new words from basic reader assignment. The lesson from the reader included silent reading to find answers to questions, reading the most interesting part aloud, seat work in workbook pages, and ditto sheets in phonics.

Group III. **Intermediate**

A quick drill of new words from lesson, with meanings was given. (These were studied while first classes had teacher's attention.) Sight reading, silent and aloud, was followed up with work in notebook and/or worksheets. (Science and health books were used as part of reading program. Plans were discussed for simple experiments.)

10:00 — 10:20 **Recess**

10:20 — 10:30 Group number games included games with time, bean bag toss, etc.

10:30 — 11:30 **Arithmetic**

Group I. **Readiness**

Number concepts were taught with games, peg board, beads, etc. Seat work followed with number and number word matching, color and number sheets, etc. and this was followed later in the year with simple combination games and papers.

Group II. **Primary**

Oral problems were taken from the day's activities, stories, catalogs, etc. Games were played about counting money, telling time, using measures of weight, length, etc. and this was followed by seat work papers on combinations to 15, counting by 2's, 3's, 4's, and simple problems.

Group III. **Intermediate**

Exercises in workbooks or worksheets given out at the beginning of the period were corrected. Next came discussion of work to be done before the next class. More difficult problems and exercises in the fundamentals were given according to individual abilities.

Oral problems were taken from community activities. For instance, problems in one community would center around the raising of potatoes, costs in connection with planting and harvesting, problems of marketing, etc.

If time allows, play store game including children from all groups.

11:30 — 12:30 **Lunch Hour**

12:30 — 12:50 **Story Hour**

Use first five minutes to review a book, at their reading level, to motivate independent reading. For the last 15 minutes read current book.

12:50 — 2:00 **Spelling — Language — Penmanship**

Use first ten minutes for formal penmanship with individual help in posture and formation of letters. (Do not try to change writing pattern already established but help individual to improve his own style.)

Group I. **Readiness**

Work in spelling workbooks stressed beginning and final consonants. Exercises in matching capital and small letters, matching beginning and final sounds to pictures, recognizing simple singular and plural nouns in pictures were used. All this work was done under supervision; then came a free period with choice of games, reading or drawing.

Group II. **Primary**

Spelling workbooks. Give final test of last week's words. Teach new lesson; pronounce words; read story; pronounce words again discussing meanings. Go over directions for exercises. Give trial test. Assign exercises, and simple sentences using misspelled words.

Group III. **Intermediate**

From standard list of most commonly used words plus words in local use, give trial test of 50 words. Use misspelled words for week's lesson. The assignment for the next week included dictionary work, alphabetical lists and using words in simple sentences, with a final test in spelling notebook.

2:00 — 2:30 **Activity Period**

Use period for creative activity, creative crayon drawing, finger painting, papier maché sculpture, weaving, and other handwork, music appreciation, or simple science experiments. More stress was placed on the academic work than would be the circumstance if a research teacher were meeting such a class daily.

PART III

ANALYSIS AND INTERPRETATION OF THE DATA

Table IX

Reasons for Changes
in
Class Enrollments

	1958 Sept. Enrol.	1959 June Enrol.	Moved	Ineligible	Removed by Parents	Excluded-Behavior Problem	Left to go to work	Death
Control Group	41	35						
Western	15	13	2					
Central	26	22	4					
Experimental Group	48	37						
Western	17	13		1	2		1	
Central	31	24	5			1		1
Total	89	72	11	1	2	1	1	1

There were two other pupils ineligible for the program as they were below 50 I.Q. on the Stanford-Binet. They were not included in the 89 apparently eligible for the program in September. In the case noted above an error in reporting the date of birth was rectified and the pupil was found to have an I.Q. of 88 on the S-B.

A family moved because of a fire which caused the death of a son. This meant that two brothers were also out of the program.

Of the 89 at the beginning of the program there were 11 families with more than one child eligible for the program. Two families each had three children involved; in all others there were two children. These eleven families accounted for 24 of the 89 children. There were no twins in the program. Two families moved taking out five of the children.

Of the nine children in the central area who moved, two did so because of the fire; two more were in foster homes and were moved by the state. The two who moved from the western area were in the same family.

Ten children came under the care of the State and lived in foster homes. Of these, two came from each of two families.

The number of children eligible for the program in the different towns ranged from 1 to 12. The following table shows this distribution.

Table X

Number of Pupils Eligible for the Program
in the Twenty Communities
September — 1958

	Number Eligible for Program												
	1	2	3	4	5	6	7	8	9	10	11	12	Total
Number of Towns													
Western Control	2		1		2								5
Western Experimental		1	1	3									5
Central Control	2					2						1	5
Central Experimental				1	2		1			1			5
Total Number	4	1	2	4	4	2	1			1		1	20

Median number eligible for classes 4
Average number eligible for classes 4.5

Table XI

Number of Pupils by Towns in Program
June — 1959

	Number in Program												
	1	2	3	4	5	6	7	8	9	10	11	12	Total
Number of Towns													
Western Control	2		2		1								5
Western Experimental		3	1	1									5
Central Control	2					2		1					5
Central Experimental			1		3	1							5
Total Number	4	3	4	1	4	3		1					20

Median number in classes 3
Average number in classes 3.6

Table X is to be read as follows: In the Western Control Area two towns each had one pupil; one town had three pupils; two towns each had five pupils. Other lines would be read in a similar manner for both Tables X and XI.

Table XII

Pupils in Program[1]

September 1958	No.	%
Boys		
W-C	10	11.2
W-E	10	11.2
C-C	15	16.9
C-E	22	24.7
	57	64.0
Girls		
W-C	5	5.6
W-E	7	7.9
C-C	11	12.4
C-E	9	10.1
	32	36.0
Total	89	100.0

June 1959	No.	%
Boys		
W-C	9	12.5
W-E	7	9.7
C-C	15	20.9
C-E	16	22.2
	47	65.3
Girls		
W-C	4	5.6
W-E	6	8.3
C-C	7	9.7
C-E	8	11.1
	25	34.7
Total	72	100.0

Nearly twice as many boys as girls were in the program both at the beginning and the end of the school year.

Table XIII

Comparison of I Q's of pupils enrolled in classes at beginning and end of school year — 1958-1959

September, 1958	CTMM IQ's			S-B
Area	L	NL	T	
Western Control (16)				
Median I Q	69	64	69	65
Average I Q	69	68	68	63
Range	57—	53—	58—	50—
	82	85	76	75
Western Experimental (16)				
Median I Q	66	68	67	69
Average I Q	68	68	67	68
Range	50—	58—	58—	56—
	80	82	74	75
Central Control (26)				
Median I Q	69	66	68	67
Average I Q	69	68	69	64
Range	56—	55—	56—	50—
	88	99	87	75
Central Experimental (31)				
Median I Q	72	67	72	69
Average I Q	71	69	70	67
Range	56—	57—	56—	50—
	84	89	82	75
Western — Control & Experimental (32)				
Median I Q	68	66	68	67
Average I Q	68	68	68	66
Range	50—	53—	58—	50—
	82	85	76	75

June, 1959	CTMM IQ's			S-B
Area	L	NL	T	
Western Control (13)				
Median I Q	68	63	68	64
Average I Q	69	65	66	62
Range	57—	53—	58—	50—
	82	82	71	75
Western Experimental (13)				
Median I Q	64	68	67	69
Average I Q	68	69	68	67
Range	58—	58—	58—	56—
	81	82	75	73
Central Control (22)				
Median I Q	69	67	68	67
Average I Q	70	69	69	64
Range	58—	57—	58—	50—
	83	99	87	75
Central Experimental (24)				
Median I Q	72	67	70	67
Average I Q	71	68	70	65
Range	60—	57—	60—	51—
	84	89	82	73
Western — Control & Experimental (26)				
Median	68	68	68	66
Average I Q	68	67	67	65
Range	57—	53—	58—	50—
	82	82	75	75

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[1] Appendix F

September, 1958

	CTMM IQ's			S-B
Area	L	NL	T	
Central — Control & Experimental (57)				
Median I Q	71	67	70	67
Average I Q	70	69	70	66
Range	56—	55—	56—	50—
	88	99	87	75
Control Area (42)				
Median I Q	69	66	68	66
Average I Q	69	68	69	64
Range	56—	53—	56—	50—
	88	99	87	75
Experimental Area (47)				
Median	68	68	70	69
Average I Q	70	69	69	67
Range	50—	57—	56—	50—
	84	89	82	75
20 Communities (89)				
Median I Q	69	67	69	67
Average I Q	70	69	69	66
Range	50—	53—	56—	50—
	88	99	87	75

June, 1959

	CTMM IQ's			S-B
Area	L	NL	T	
Central — Control & Experimental (46)				
Median	70	67	70	67
Average I Q	71	69	70	64
Range	58—	57—	58—	50—
	84	99	87	75
Control Area (35)				
Median I Q	69	65	68	65
Average I Q	70	67	68	63
Range	57—	53—	58—	50—
	83	99	87	75
Experimental Area (37)				
Median I Q	68	67	68	67
Average I Q	70	68	69	66
Range	58—	57—	58—	51—
	84	89	82	73
20 Communities (72)				
Median I Q	68	66	68	66
Average I Q	70	68	69	64
Range	57—	53—	58—	50—
	84	99	87	75

Achievement Testing

In October, 1958, the California Achievement Test was administered to all educable mentally retarded pupils in the control and experimental areas. At that time 79 pupils were available, due to limiting experimental classes to 5 and the moving of some pupils. CAT was chosen as it was standardized on the same group used for the standardization of the CTMM. The results are as follows:

Table XIV

Lower Primary Median Grade Levels — October, 1958

	W.C. (3)*	W.E. (1)	C.C. (4)	C.E. (6)	West. Area (4)	Cent. Area (10)	All Con. (7)	All Exp. (7)	20 Com. (14)
Reading Vocabulary	1.8	2.1	2.1	1.8	1.9	1.8	1.8	2.0	1.8
Reading Comprehension	1.5	1.7	1.6	1.4	1.8	1.3	1.5	1.4	1.4
Total Reading	1.5	1.9	2.1	1.4	1.8	1.6	1.9	1.5	1.6
Arithmetic Reasoning	1.8	1.6	1.8	1.6	1.8	1.6	1.7	1.6	1.7
Arithmetic Fundamentals	1.5	1.3	1.8	1.8	1.4	1.8	1.5	1.5	1.4
Total Arithmetic	2.0	1.5	1.8	1.6	1.9	1.6	2.0	1.7	1.7
Mechanics of English	1.5	1.7	1.9	1.4	1.6	1.7	1.8	1.5	1.6
Spelling	1.5	1.4	1.3	1.4	1.4	1.3	1.3	1.3	1.3
Total Language	1.8	1.6	1.6	1.4	1.8	1.3	1.6	1.4	1.3
Total for battery	1.8	1.6	1.8	1.4	1.8	1.4	1.7	1.5	1.6
Chronological Grade Placement	3.8	3.6	4.3	3.6	3.9	3.8	4.0	3.7	3.8
Average IQ CTMM	61	73	64	70	68	67	63	70	67
S-B	64	70	68	70	66	69	67	70	68

*Number of pupils

The Lower Primary CAT was administered to grades 1 and 2. Achievement control pupils (7) were 2.3 grades below their chronological grade placement and experimental pupils (6) were 2.2 grades below their chronological grade placement level. Control and experimental groups were 0.4 grade apart in reading; 0.3 of a grade in arithmetic; 0.2 of a grade in language; and 0.2 for the total battery. In each case the control group was higher than the experimental group.

Average I Q for control — 63 on CTMM
67 on S-B

On experimental — 70 on both CTMM and S-B. This is the reverse of the results to be expected.

Table XV

Upper Primary Median Grade Levels — October, 1958

	W.C. (2)*	W.E. (6)	C.C. (8)	C.E. (4)	West. Area (8)	Cent. Area (12)	All Con. (10)	All Exp. (10)	20 Com. (20)
Reading Vocabulary	3.0	2.8	2.6	2.0	3.3	2.6	2.7	2.0	2.6
Reading Comprehension	2.5	3.6	2.5	2.5	3.4	2.5	2.6	3.3	2.7
Total Reading	2.8	3.3	2.5	2.5	3.3	2.5	2.6	3.0	2.6
Arithmetic Reasoning	2.8	2.4	2.6	1.5	2.5	2.0	2.6	2.4	2.4
Arithmetic Fundamentals	3.3	3.6	2.6	2.0	3.6	2.5	2.6	3.5	3.0
Total Arithmetic	3.0	3.3	2.7	2.0	3.3	2.6	2.7	3.0	2.7
Mechanics of English	2.3	3.3	1.9	2.0	3.1	1.9	2.0	3.2	2.3
Spelling	3.3	3.1	1.8	2.0	3.1	1.8	1.8	3.0	2.2
Total Language	3.0	2.9	2.0	2.0	2.9	2.0	2.1	2.8	2.3
Total for battery	2.8	2.9	2.3	2.0	2.9	2.3	2.3	2.8	2.4
Chronological Grade Placement	4.5	4.9	3.6	4.8	4.8	3.8	3.9	4.8	4.3
Average IQ-CTMM	71	65	72	69	67	71	72	67	69
S-B	68	66	68	63	66	66	68	65	66

*Number of pupils

The Upper Primary CAT was administered to pupils in grades 3 and 4. In achievement control pupils (10) were 1.6 grades below their chronological grade placement level while the experimental pupils (10) were 2.0 grades below their chronological grade placement level. The control and experimental groups were 0.4 of a grade apart in reading; 0.3 of a grade apart in arithmetic; 0.7 of a grade apart in language, and 0.5 of a grade apart on the total battery with the experimental group having the higher grade levels.

Average I Q for the control group was 72 on CTMM; 68 on S-B; for experimental group 67 on CTMM and 65 on S-B. This is just the reverse of the results on the achievement tests that one should expect. Here the lower the average I Q, the higher the average achievement.

Table XVI

Elementary Median Grade Levels — October, 1958

	W.C. (5)*	W.E. (3)	C.C. (10)	C.E. (5)	West. Area (8)	Cent. Area (15)	All Con. (15)	All Exp. (8)	20 Com. (23)
Reading Vocabulary	3.0	5.3	2.9	3.5	3.1	3.0	2.9	3.8	3.1
Reading Comprehension	3.3	4.5	3.4	2.5	3.8	3.0	3.3	3.8	3.3
Total Reading	3.3	5.0	3.2	2.9	3.8	3.1	3.2	3.8	3.2
Arithmetic Reasoning	3.5	4.5	3.7	2.8	3.9	3.6	3.7	3.8	3.7
Arithmetic Fundamentals	4.5	4.0	4.1	3.8	4.3	3.9	4.1	3.8	3.9
Total Arithmetic	4.0	4.5	3.9	3.3	4.3	3.8	3.9	4.1	3.8
Mechanics of English	3.8	4.0	3.8	2.8	3.9	3.6	3.8	3.6	3.7
Spelling	3.0	4.0	3.1	3.5	3.6	3.2	3.0	3.8	3.3
Total language	3.5	4.5	3.6	2.9	3.9	3.4	3.5	3.8	3.5
Total for battery	3.5	4.5	3.5	2.9	3.9	3.3	3.4	3.8	3.5
Chronological Grade Placement	8.0	5.5	7.4	6.5	7.3	7.0	7.5	6.4	7.0
Average IQ-CTMM	65	72	67	69	68	68	66	70	68
S-B	57	70	59	59	62	59	58	63	60

*Number of pupils

The elementary CAT was administered to grades 5 & 6. In achievement the control pupils (15) were 4.1 grades below their chronological grade placement while experimental pupils (8) were 2.6 grades below their chronological age grade placement. The control and experimental groups were 0.6 of a grade apart in reading; 0.2 of a grade apart in arithmetic; 0.3 of a grade apart in language, and 0.4 of a grade apart on the total battery. The experimental groups had the higher grade levels on all parts of the test.

Average I Q for control group was 66 on CTMM and 58 on the S-B; average I Q for experimental group was 70 on the CTMM and 63 on the S-B. The average achievement results are in the same relationship as the average I Q's.

Table XVII

Junior High Median Grade Levels — October, 1958

	W.C. (3)*	W.E. (5)	C.C. (2)	C.E. (12)	West. Area (8)	Cent. Area (14)	All Con. (5)	All Exp. (17)	20 Com. (22)
Reading Vocabulary	4.8	5.5	5.3	4.9	4.9	5.1	5.0	5.0	4.9
Reading Comprehension	5.7	5.5	5.0	4.9	5.6	5.0	5.0	5.2	5.4
Total Reading	5.2	5.5	5.0	4.8	5.3	5.0	5.2	5.3	5.2
Arithmetic Reasoning	4.5	4.8	6.0	4.7	4.7	4.8	5.0	4.7	4.7
Arithmetic Fundamentals	5.5	5.3	5.5	5.3	5.3	5.4	5.5	5.3	5.3
Total Arithmetic	4.8	5.3	5.8	5.2	4.9	5.3	5.0	5.2	5.1
Mechanics of English	4.3	5.3	5.5	5.3	4.8	5.3	4.5	5.0	4.9
Spelling	4.5	4.5	4.3	4.4	4.4	4.4	4.4	4.4	4.4
Total language	4.5	5.0	4.8	4.7	4.8	4.7	4.7	4.8	4.7
Total for battery	4.8	5.3	5.3	4.9	4.9	5.1	5.0	5.0	4.9
Chronological Grade Placement	9.3	9.8	8.3	8.4	9.6	8.4	9.3	8.8	8.9
Average IQ-CTMM	66	66	77	67	66	69	70	67	68
S-B	67	68	69	67	68	68	68	68	68

* Number of pupils

The junior high level CAT was administered to pupils in grades 7 & 8. In achievement control pupils (5) were 4.3 grades below their chronological age grade placement while experimental pupils (17) were 3.8 grades below their chronological age grade placement. The control and experimental groups were 0.1 of a grade apart in reading; 0.2 of a grade apart in arithmetic; 0.1 of a grade apart in language, and just the same on the total battery. In the case of reading, arithmetic, and language the experimental group attained slightly higher grade levels. The average I Q was 70 for the control group on the CTMM and 68 on the S-B; for the experimental group the average was 67 on the CTMM and 68 on the S-B. There is little difference in the two groups. The I Q's and CTMM's seem to run quite closely.

Table XVIII

CAT Median Grade Levels — May, 1959

Lower Primary

	West. Cont. (3)	West. Exp. (1)	Cent. Cont. (3)	Cent. Exp. (5)	West. Area (4)	Cent. Area (8)	Cont. Area (6)	Exp. Area (6)	20 Com. (12)
Reading Vocabulary	1.5	2.3	2.0	2.0	2.3	1.9	1.8	2.8	1.9
Reading Comprehension	2.8	2.3	2.0	2.0	2.6	1.9	2.3	2.1	2.1
Total Reading	2.5	2.3	2.0	2.0	2.1	1.9	2.3	2.1	2.1
Arithmetic Reasoning	2.0	2.3	2.5	2.2	2.1	2.4	2.1	2.2	2.1
Arithmetic Fundamentals	2.5	1.8	4.8	2.5	1.8	3.8	2.8	2.3	2.4
Total Arithmetic	2.3	1.8	3.8	2.5	1.9	2.8	2.4	2.3	2.3
Mechanics of English	1.8	1.8	2.0	1.8	1.8	1.8	1.9	1.8	1.8
Spelling	1.5	1.3	1.8	2.0	1.4	1.8	1.6	1.8	1.6
Total Language	2.0	1.8	2.0	1.8	1.9	1.8	1.9	1.8	1.8
Total for Battery	2.5	1.8	2.5	2.3	2.3	2.3	2.4	2.1	2.2
Chronological Grade Placement	4.5	4.3	4.5	3.8	4.4	3.9	4.4	3.9	4.1
Median Grade Norm	2.8	2.8	3.8	2.8	2.8	2.8	3.3	2.8	2.8
Average I.Q									
CTMM	65	73	66	68	67	68	65	69	67
S-B	62	70	73	67	64	69	67	68	68

Table XIX

CAT Median Grade Levels May, 1959

Upper Primary Form

	West. Cont. (2)	West. Exp. (6)	Cent. Cont. (7)	Cent. Exp. (4)	West. Area (8)	Cent. Area (11)	Cont. Area (9)	Exp. Area (10)	20 Com. (19)
Reading Vocabulary	3.0	4.1	3.1	2.3	4.1	3.0	3.0	3.8	3.2
Reading Comprehension	3.3	4.3	2.8	2.8	4.2	2.7	2.8	4.1	3.0
Total Reading	3.0	4.1	3.1	2.4	4.1	3.0	3.1	3.8	3.2
Arithmetic Reasoning	3.5	3.6	2.8	2.9	3.6	2.8	2.8	3.3	3.0
Arithmetic Fundamentals	4.0	3.6	3.3	3.4	3.6	2.8	3.3	3.4	3.3
Total Arithmetic	3.5	3.8	3.0	2.9	3.8	2.9	3.0	3.6	3.2
Mechanics of English	3.0	3.6	3.0	2.3	3.4	2.5	3.0	3.4	3.1
Spelling	3.5	3.4	3.0	2.8	3.4	2.8	3.0	3.1	3.0
Total Language	3.0	3.4	3.2	2.3	3.4	2.5	3.2	3.3	3.2
Total for Battery	3.5	3.9	3.2	2.4	3.9	3.0	3.2	3.6	3.3
Chronological Grade Placement	5.3	5.4	4.5	5.3	4.3	4.7	4.8	5.3	5.1
Median Grade Norm	4.3	4.3	3.8	3.3	4.3	3.8	3.8	3.8	3.8
Average I.Q.									
CTMM	71	65	72	72	69	72	72	68	70
S-B	68	66	67	65	66	66	68	65	66

Table XX

CAT Median Grade Levels May, 1959

Elementary Form

	West. Cont. (5)	West. Exp. (2)	Cent. Cont. (10)	Cent. Exp. (5)	West. Area (7)	Cent. Area (15)	Cont. Area (15)	Exp. Area (7)	20 Com. (22)
Reading Vocabulary	3.5	4.5	3.9	3.8	4.0	3.8	3.8	4.0	3.8
Reading Comprehension	3.0	4.0	3.8	3.0	3.3	3.3	3.3	3.5	3.3
Total Reading	3.3	4.3	4.1	3.5	3.5	3.5	3.5	3.8	3.6
Arithmetic Reasoning	4.0	4.0	4.2	4.0	4.0	4.2	4.1	4.0	4.1
Arithmetic Fundamentals	4.0	4.8	4.3	5.5	4.3	4.4	4.3	5.3	4.4
Total Arithmetic	4.3	4.3	4.3	4.5	4.3	4.5	4.3	4.5	4.3
Mechanics of English	4.0	4.0	3.8	4.5	4.0	3.9	3.8	4.5	3.9
Spelling	3.5	4.5	4.1	3.5	4.0	4.0	3.8	4.3	3.9
Total Language	3.5	4.3	3.9	4.0	3.8	3.8	3.8	4.0	3.9
Total for Battery	3.8	4.3	3.9	4.0	3.8	3.8	3.8	4.0	3.9
Chronological Grade Placement	8.5	6.3	8.3	7.5	8.0	6.3	8.3	7.3	7.8
Median Grade Norm	6.8	5.8	6.8	5.8	5.8	6.8	6.8	5.8	6.8
Average I.Q.									
CTMM	65	73	67	59	68	64	66	63	65
S-B	57	72	59	59	61	59	58	61	60

Table XXI

CAT Median Grade Levels May, 1959

Junior High Level

	West. Cont. (3)	West. Exp. (4)	Cent. Cont. (2)	Cent. Exp. (10)	West. Area (7)	Cent. Area (12)	Cont. Area (5)	Exp. Area (14)	20 Com. (19)
Reading Vocabulary	4.8	4.8	6.5	6.3	4.8	6.6	5.5	5.8	5.5
Reading Comprehension	4.8	5.1	5.9	5.7	5.0	5.1	5.5	5.4	5.4
Total Reading	4.8	4.8	6.2	5.8	4.8	5.9	5.5	5.6	5.5
Arithmetic Reasoning	4.7	6.3	6.3	5.8	4.8	6.1	5.0	5.8	5.5
Arithmetic Fundamentals	5.3	5.3	5.5	5.6	5.4	5.6	5.5	5.4	5.4
Total Arithmetic	5.0	5.6	6.0	5.3	5.3	5.8	5.8	5.4	5.5
Mechanics of English	4.2	4.4	5.0	6.2	4.3	4.8	4.5	4.3	4.4
Spelling	4.3	5.8	4.3	5.1	5.0	5.8	4.5	5.1	4.8
Total Language	4.5	5.1	4.8	5.6	4.8	4.9	4.6	5.1	4.8
Total for Battery	4.8	5.1	5.7	5.6	4.9	5.4	5.0	5.4	5.3
Chronological Grade Placement	9.9	10.1	8.9	9.2	10.0	9.2	9.8	9.4	9.5
Median Grade Norm	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8
Average I.Q.									
CTMM	66	66	77	67	66	69	70	67	68
S-B	67	68	69	67	68	68	68	68	68

Table XXII

Gains on test-retest use of California Achievement Test
arranged by test levels
Test administered October, 1958 and readministered in May, 1959
(Measured in tenths of a year based on grade levels)

	West. Cont. (3)*	West. Exp. (1)	Cent. Cont. (3)	Cent. Exp. (5)	West. Area (4)	Cent. Area (8)	Cont. Area (6)	Exp. Area (6)	20 Com. (12)
Lower Primary									
Reading Vocabulary	0.5	0.2	0.1	0.6	0.4	0.4	0.3	0.6	0.4
Reading Comprehension	0.7	0.3	0.3	0.5	0.6	0.4	0.5	0.4	0.5
Total Reading	0.6	0.3	0.2	0.6	0.5	0.4	0.4	0.5	0.5
Arithmetic Reasoning	0.3	0.4	0.5	0.7	0.3	0.6	0.4	0.6	0.5
Arithmetic Fundamentals	0.3	0.3	1.7	0.9	0.3	1.2	1.0	0.8	0.8
Total Arithmetic	0.3	0.3	1.1	0.8	0.3	0.9	0.7	0.7	0.7
Mechanics of English	0.2	0.2	0.2	0.4	0.2	0.3	0.2	0.4	0.3
Spelling	0.8	0.0	0.2	0.4	0.6	0.3	0.5	0.3	0.4
Total language	0.5	0.1	0.2	0.4	0.4	0.4	0.4	0.4	0.4
Total battery	0.5	0.3	0.6	0.6	0.4	0.6	0.5	0.6	0.6
	(2)	(6)	(7)	(4)	(8)	(11)	(9)	(10)	(19)
Upper Primary									
Reading Vocabulary	0.2	0.9	0.3	0.5	0.8	0.4	0.3	0.7	0.6
Reading Comprehension	0.5	0.6	0.3	0.4	0.6	0.4	0.4	0.5	0.5
Total Reading	0.4	0.8	0.3	0.5	0.8	0.4	0.4	0.7	0.5
Arithmetic Reasoning	0.6	0.9	0.2	0.8	0.8	0.4	0.3	0.8	0.6
Arithmetic Fundamentals	0.7	0.4	0.6	0.7	0.5	0.7	0.7	0.5	0.6
Total Arithmetic	0.6	0.6	0.4	0.8	0.6	0.6	0.5	0.7	0.6
Mechanics of English	0.7	0.7	0.4	0.3	0.5	0.8	0.4	0.6	0.5
Spelling	0.0	0.8	0.9	0.9	0.5	0.4	0.7	0.8	0.8
Total language	0.3	0.8	0.6	0.6	0.7	0.6	0.6	0.7	0.6
Total battery	0.6	0.8	0.5	0.6	0.7	0.6	0.6	0.7	0.6
	(5)	(2)	(10)	(5)	(7)	(15)	(15)	(7)	(22)
Elementary									
Reading Vocabulary	0.3	0.2	0.8	0.7	0.3	0.8	0.7	0.5	0.6
Reading Comprehension	—0.6	0.2	0.6	1.2	—0.2	0.8	0.2	0.9	0.5
Total Reading	0.0	0.1	0.7	1.0	0.0	0.8	0.4	0.7	0.5
Arithmetic Reasoning	0.1	0.1	0.3	1.2	0.1	0.8	0.2	0.8	0.5
Arithmetic Fundamentals	—0.5	0.2	0.2	1.6	—0.3	0.6	—0.1	1.2	0.3
Total Arithmetic	—0.2	0.1	0.2	1.4	—0.1	0.6	0.1	1.0	0.4
Mechanics of English	0.3	0.1	0.0	1.4	0.2	0.6	0.1	1.0	0.4
Spelling	1.0	0.5	0.4	0.6	0.9	0.5	0.6	0.6	0.6
Total language	0.7	0.3	0.2	1.0	0.6	0.5	0.4	0.8	0.5
Total battery	0.1	0.2	0.4	1.1	0.1	0.6	0.3	0.8	0.5
	(3)	(4)	(2)	(10)	(7)	(12)	(5)	(14)	(19)
Junior High School									
Reading Vocabulary	—0.1	—0.7	1.4	0.8	—0.4	1.0	0.5	0.4	0.4
Reading Comprehension	—0.6	—0.2	0.9	0.5	—0.3	0.5	0.0	0.3	0.2
Total Reading	—0.3	—0.5	1.2	0.6	—0.4	0.7	0.3	0.3	0.3
Arithmetic Reasoning	0.3	0.7	0.3	1.2	0.5	1.0	0.3	1.0	0.8
Arithmetic Fundamentals	0.1	0.2	0.2	0.3	0.1	0.3	0.1	0.4	0.2
Total Arithmetic	0.2	0.4	0.2	0.7	0.3	0.6	0.2	0.6	0.5
Mechanics of English	0.0	—0.5	—0.4	0.6	—0.3	0.4	—0.1	0.2	0.1
Spelling	0.2	0.5	—0.2	0.4	0.4	0.4	0.1	0.4	0.4
Total language	0.0	0.3	—0.1	0.4	0.0	0.4	0.0	0.3	0.2
Total battery	0.0	0.0	0.5	0.6	0.0	0.6	0.2	0.4	0.5
Average gain by group	0.2	0.4	0.4	0.7	0.3	0.6	0.3	0.6	0.5

* Number of pupils

Table XXIII

Gains on test-retest use of California Achievement Test
arranged according to sections of the test
Test administered October, 1958 and readministered in May, 1959
(Measured in tenths of a year based on grade levels)

	West. Cont.	West. Exp.	Cent. Cont.	Cent. Exp.	West. Area	Cent. Area	Cont. Area	Exp. Area	20 Com.
Reading Vocabulary									
Lower Primary	0.5	0.2	0.1	0.6	0.4	0.4	0.3	0.6	0.4
Upper Primary	0.2	0.9	0.3	0.5	0.8	0.4	0.3	0.7	0.6
Elementary	0.3	0.2	0.8	0.7	0.3	0.8	0.7	0.5	0.6
Junior High School	—0.1	—0.7	1.4	0.8	—0.4	1.0	0.5	0.4	0.4
Reading Comprehension									
Lower Primary	0.7	0.3	0.3	0.5	0.6	0.4	0.5	0.4	0.5
Upper Primary	0.5	0.6	0.3	0.4	0.6	0.4	0.4	0.5	0.5
Elementary	—0.6	0.2	0.6	1.2	—0.2	0.8	0.2	0.9	0.5
Junior High School	—0.6	—0.2	0.9	0.5	—0.3	0.5	0.0	0.3	0.2
Total Reading									
Lower Primary	0.6	0.3	0.2	0.6	0.5	0.4	0.4	0.5	0.5
Upper Primary	0.4	0.8	0.3	0.5	0.8	0.4	0.4	0.7	0.5
Elementary	0.0	0.1	0.7	1.0	0.0	0.8	0.4	0.7	0.5
Junior High School	—0.3	—0.5	1.2	0.6	—0.4	0.7	0.3	0.3	0.3
Arithmetic Reasoning									
Lower Primary	0.3	0.4	0.5	0.7	0.3	0.6	0.4	0.6	0.5
Upper Primary	0.6	0.9	0.2	0.8	0.8	0.4	0.3	0.8	0.6
Elementary	0.1	0.1	0.3	1.2	0.1	0.8	0.2	0.8	0.5
Junior High School	0.3	0.7	0.3	1.2	0.5	1.0	0.3	1.0	0.8
Arithmetic Fundamentals									
Lower Primary	0.3	0.3	1.7	0.9	0.3	1.2	1.0	0.8	0.8
Upper Primary	0.7	0.4	0.6	0.7	0.5	0.7	0.7	0.5	0.6
Elementary	0.5	0.2	0.2	1.6	—0.3	0.6	—0.1	1.2	0.3
Junior High School	0.1	0.2	0.2	0.3	0.1	0.3	0.1	0.4	0.2
Total Arithmetic									
Lower Primary	0.3	0.3	1.1	0.8	0.3	0.9	0.7	0.7	0.7
Upper Primary	0.6	0.6	0.4	0.8	0.6	0.6	0.5	0.7	0.6
Elementary	—0.2	0.1	0.2	1.4	—0.1	0.6	0.1	1.0	0.4
Junior High School	0.2	0.4	0.2	0.7	0.3	0.6	0.2	0.6	0.5
Mechanics of English									
Lower Primary	0.2	0.2	0.2	0.4	0.2	0.3	0.2	0.4	0.3
Upper Primary	0.7	0.7	0.4	0.3	0.5	0.8	0.4	0.6	0.5
Elementary	0.3	0.1	0.0	1.4	0.2	0.6	0.1	1.0	0.4
Junior High School	0.0	—0.5	—0.4	0.6	—0.3	0.4	—0.1	0.2	0.1
Spelling									
Lower Primary	0.8	0.0	0.2	0.4	0.6	0.3	0.5	0.3	0.4
Upper Primary	0.0	0.8	0.9	0.9	0.5	0.4	0.7	0.8	0.8
Elementary	1.0	0.5	0.4	0.6	0.9	0.5	0.6	0.6	0.6
Junior High School	0.2	0.5	—0.2	0.4	0.4	0.4	0.1	0.4	0.4
Total Language									
Lower Primary	0.5	0.1	0.2	0.4	0.4	0.4	0.4	0.4	0.4
Upper Primary	0.3	0.8	0.6	0.6	0.7	0.6	0.6	0.7	0.6
Elementary	0.7	0.3	0.2	1.0	0.6	0.5	0.4	0.8	0.5
Junior High School	0.0	0.3	—0.1	0.4	0.0	0.4	0.0	0.3	0.2
Total Battery									
Lower Primary	0.5	0.3	0.6	0.6	0.4	0.6	0.5	0.6	0.6
Upper Primary	0.6	0.8	0.5	0.6	0.7	0.6	0.6	0.7	0.6
Elementary	0.1	0.2	0.4	1.1	0.1	0.6	0.3	0.8	0.5
Junior High School	0.0	0.0	0.5	0.6	0.0	0.6	0.2	0.4	0.5
Average gains by group	0.2	0.4	0.4	0.7	0.3	0.6	0.3	0.6	0.5

A comparison of the gains for all pupils on the test re-test use of the California Achievement Test shows an average gain by the experimental group (37) of 0.5 of a grade on reading as against 0.4 of a grade by the control group.

On arithmetic the experimental group made an average gain of 0.7 of a grade as compared with 0.3 of a grade by the control group.

Average gains on the language section were the same as on the reading section.

The total battery indicates an average gain of 0.6 of a grade for experimental pupils and 0.3 of a grade for control pupils. Another study with larger numbers would be helpful to show whether it can be supported that pupils receiving one day a week of special training with material left with the regular teacher can be expected to produce twice as much gain as when a pupil is retained in the regular classroom.

Details of gains made by individual pupils may be found in the appendices.[1]

Table XXIV

Comparison of Gains
(in terms of sections of the test)
on the Test-retest use of the
California Achievement Test

	West. Cont. (13)	Cent. Cont. (22)	West. Exp. (13)	Cent. Exp. (24)	West. Area (26)	Cent. Area (46)	Total Cont. (35)	Total Exp. (37)	20 Com. (72)
Reading Vocabulary	0.2	0.6	0.2	0.7	0.3	0.7	0.5	0.5	0.5
Reading Comprehension	0.1	0.5	0.3	0.6	0.1	0.5	0.3	0.5	0.4
Total Reading	0.1	0.6	0.3	0.7	0.2	0.6	0.4	0.5	0.5
Arithmetic Reasoning	0.3	0.3	0.6	1.0	0.4	0.6	0.3	0.9	0.6
Arithmetic Fundamentals	0.0	0.5	0.3	0.8	0.2	0.6	0.3	0.6	0.5
Total Arithmetic	0.1	0.4	0.5	0.9	0.3	0.6	0.3	0.7	0.5
Mechanics of English	0.3	0.1	0.2	0.7	0.2	0.4	0.2	0.5	0.3
Spelling	0.6	0.5	0.6	0.5	0.6	0.5	0.6	0.5	0.5
Total Language	0.4	0.3	0.4	0.6	0.4	0.5	0.4	0.5	0.4
Total Battery	0.2	0.4	0.4	0.7	0.3	0.6	0.3	0.6	0.5

Core Achievement Tests

Dr. J. Wayne Wrightstone, Director of Research, Cooperative Research Project conducted by the Board of Education of the City of New York, gave permission for us to adapt and use the Core Achievement Tests developed in connection with the New York City Study of Mentally Handicapped Children. Several changes had to be made to have them usable with rural children.

Not all pupils did all the Core Achievement Tests as they are set up on the basis of the mental age of children. "Core I (Family and Home) and Core II (The Neighborhood) are intended for use with elementary school children whose mental age is below six years. Core I children have chronological ages of 6, 7, 8 and Core II have chronological ages of 9 or 10. For those elementary school children with mental ages from 6 to 9, Core III (Our Community) is provided. The chronological age is 11 or 12.

"For pupils with chronological ages of 12-17 and a corresponding wide range of mental age and academic achievement, Cores IV-VIII are used. Core IV deals with *Our City* (chronological age 13); Core V is a study of *Job Areas* (chronological age 14). This core has separate explanatory areas for boys and girls. Core VI deals with *Choosing, Getting and Holding a Job* (chronological age 14, 15) Core VII deals with *Spending One's Income* (chronological age 15) Core VIII deals with *The Worker as a Citizen* and *Social Being* (chronological age 16, 17)."[2]

All pupils were given the mathematical concepts test and the reading readiness or the reading achievement test unless they were so far down in the scale mentally that it was quite apparent that the individual could not do the material.

Since not all pupils took all tests, average gains would be meaningless on the total tests taken and consequently were not computed. On individual tests comparisons can be made.

Details of individual scores by areas may be found in the appendix.[3] Included in the body of the report are the results by control and experimental areas. Gains have been made by all but seven of the thirty-five pupils in the control area and by all of the thirty-seven in the experimental area.

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[1] Appendix G

[2] Excerpts from "Statement of Course of Study for Use in Classes for Children with Retarded Mental Development" Board of Education of the City of New York, 1952.

[3] Appendix H

The range of gains, median gain, and average gains for each of the cores may be noted from the following table:

Table XXV

Core Achievement Test Scores *

		Control Group (35)					Experimental Group (37)				
	Possible Score	No. Taking	Range in gain	No. Gaining	Mdn Gain	Av. Gain	No. Taking	Range in gain	No. Gaining	Mdn Gain	Av. Gain
Cores 1 & 2	39	35	—4 to +13	28	1	1.6	37	—2 to +10	33	0	1.4
Reading Readiness	53	17	—6 to +14	14	1	3.1	7	0 to +18	7	8	9.0
Cores 3 & 4	61	28	—15 to +8	19	1	0.7	30	—3 to +14	26	6	5.4
Core 5 (Boys)	45	8	—3 to +11	7	2	4.0	10	—2 to +12	7	3	2.3
Core 5 (Girls)	45	4	—3 to +3	3	1	0.3	7	—2 to +5	6	2	2.1
Core 6	78	12	—5 to +8	10	4	2.6	17	—4 to +24	15	6	6.6
Cores 7 & 8	162	12	—16 to +28	7	2	1.3	17	—5 to +23	14	10	7.5
Mathematical Concepts	79	32	—6 to +13	25	4	4.3	37	—16 to +26	36	9	9.5
Reading Achievement	145	31	—23 to +31	26	8	8.4	37	—2 to +56	35	17	20.6

* Scores are determined by the number correct.

In general the gains appear to be somewhat greater for the experimental group than for the control group. The very great improvement on the Mathematical Concepts correlates very well with the gains in arithmetic on the CAT. In both testings the experimental group average gains are more than twice those of the control group. Average gains on the Core Reading Achievement Test as compared with average gains on the reading section of CAT were far greater for the experimental group than for the control group.

Table XXVI

Data Concerning Grade, C.A., M.A., Stanford-Binet I.Q.
and
Core Achievement Tests Administered to
WESTERN CONTROL AREA

Town 1	School Grade	C.A.	M.A.	S-B IQ	1 & 2	Reading Readiness	3 & 4	5B	5G	6	7 & 8	Math. Concepts	Reading Achievement
1 BP	5	12-2	6-1	50	x								
2 HL	1	7-6	4-1	54	x	x							
3 HS	6	12-7	6-6	52	x		x	x		x	x	x	x
4 LB	8	14-4	8-0	57	x		x	x		x	x	x	x
5 LC	7	13-3	9-10	75	x		x	x		x	x	x	x
Town 2													
1 BL	6	14-4	7-0	50	x		x		x	x	x	x	x
2 DJ	8	14-10	10-0	70	x		x	x		x	x	x	x
3 PJ	4	9-10	7-2	73	x		x					x	x
Town 3													
1 ME	2	9-10	6-4	64	x	x	x					x	x
Town 4													
1 PA	3	9-7	6-0	63	x	x	x					x	
Town 5													
1 FF	6	15-10	10-0	67	x		x		x	x	x	x	x
2 MA	5	11-3	7-4	65	x		x	x		x	x	x	x
3 TP	3	9-0	6-0	67	x	x							

Table XXVII

Data Concerning Grade, C.A., M.A., Stanford-Binet I.Q. and Core Achievement Tests Administered to WESTERN EXPERIMENTAL AREA

Town 1	School Grade	C.A.	M.A.	S-B IQ	1 & 2	Reading Readiness	3 & 4	5B	5G	6	7 & 8	Math. Concepts	Reading Achievement
1 BS	7	13-9	9-0	67	x		x		x	x	x	x	x
2 MM	5	9-11	7-0	71	x		x					x	x
3 YS	3	9-7	6-8	70	x		x					x	x
Town 2													
1 HL	2	8-7	6-0	70	x	x						x	x
2 HR	4	10-2	6-10	67	x		x					x	x
Town 3													
1 CR	4	14-9	8-0	56	x		x	x		x	x	x	x
2 NJ	6	12-1	8-6	70	x		x	x		x	x	x	x
Town 4													
1 BB	3	9-7	6-2	64	x		x					x	x
2 GA	7	14-4	10-2	73	x		x	x		x	x	x	x
3 PH	7	14-10	9-10	69	x		x		x	x	x	x	x
4 WD	3	9-8	7-0	72	x		x					x	x
Town 5													
1 CE	7	14-9	8-8	62	x		x		x	x	x	x	x
2 WK	3	9-4	6-2	66	x		x	x				x	x

Table XXVIII

Data Concerning Grade, C.A., M.A., Stanford-Binet I.Q. and Core Achievement Tests Administered in CENTRAL CONTROL AREA

Town 1	School Grade	C.A.	M.A.	S-B IQ	1 & 2	Reading Readiness	3 & 4	5B	5G	6	7 & 8	Math. Concepts	Reading Achievement
1 BJ	6	13-9	7-2	53	x		x	x		x	x	x	x
2 BM	3	9-8	6-4	66	x	x	x					x	x
3 CA	3	9-3	3-3	57	x	x						x	x
4 CB	5	12-3	6-4	52	x		x					x	x
5 HC	6	11-3	8-0	71	x		x					x	x
6 HS	6	12-8	6-4	50	x		x					x	x
Town 2													
1 PW	3	8-8	6-6	75	x	x	x					x	x
Town 3													
1 DK	3	8-1	5-10	72	x	x	x					x	x
2 HJ	3	8-4	5-11	71	x	x						x	x
3 MD	7	12-2	8-6	70	x		x		x	x	x	x	x
4 PD	3	8-8	6-2	71	x		x					x	x
5 SC	3	7-11	4-11	62	x	x						x	x
6 SJ	2	7-6	5-4	71	x	x						x	x
7 SJ	4	9-5	6-4	55	x	x	x					x	x
8 WR	6	13-9	9-4	69	x	x	x					x	x
Town 4													
1 ES	5	11-8	7-4	63	x	x	x					x	x
2 HB	5	11-1	7-0	59	x	x	x					x	x
3 LM	8	14-7	9-6	67	x		x	x		x	x	x	x
4 PB	3	9-1	6-8	73	x	x	x					x	x
5 WL	5	14-7	8-8	62	x		x	x		x	x	x	x
6 WD	2	10-5	7-6	72	x	x	x					x	x
Town 5													
1 GJ	5	13-6	7-6	56	x		x		x	x	x	x	x

Table XXIX

Data Concerning Grade, C.A., M.A., Stanford-Binet I.Q.
and Core Achievement Tests
Administered in
CENTRAL EXPERIMENTAL AREA

Town 1	School Grade	C.A.	M.A.	S-B IQ	1 & 2	Reading Readiness	3 & 4	5B	5G	6	7 & 8	Math. Concepts	Reading Achievement
1 CJ	2	8-1	5-10	72	x	x						x	x
2 SE	6	12-4	6-1	50	x		x					x	x
3 SG	5	11-2	6-6	58	x		x					x	x
4 SH	5	11-2	6-2	55	x	x						x	x
5 SE	5	11-9	7-4	62	x		x					x	x
Town 2													
1 BC	1	7-0	5-0	71	x	x						x	x
2 CB	7	13-3	9-4	71	x		x		x	x	x	x	x
3 DM	2	8-8	5-4	62	x	x						x	x
4 GP	7	13-11	9-10	72	x		x	x		x	x	x	x
5 HB	3	11-7	6-8	58	x		x					x	x
6 JR	6	13-1	9-0	69	x		x	x		x	x	x	x
Town 3													
1 MW	2	8-2	5-0	61	x	x						x	x
2 WE	7	13-9	9-8	72	x		x	x		x	x	x	x
3 YW	3	8-9	6-2	70	x	x						x	x
Town 4													
1 BP	8	13-11	9-0	66	x		x	x		x	x	x	x
2 FC	8	13-9	9-0	67	x		x		x	x	x	x	x
3 GB	2	7-9	5-6	71	x	x						x	x
4 GR	3	9-4	6-8	71	x		x					x	x
5 HR	8	14-7	9-4	66	x		x		x	x	x	x	x
Town 5													
1 CS	7	14-9	7-3	51	x		x	x		x	x	x	x
2 PR	6	13-4	8-6	64	x		x			x	x	x	x
3 RC	3	9-7	5-9	60	x	x						x	x
4 RR	7	13-8	9-10	67	x		x	x		x	x	x	x
5 VP	7	15-5	10-8	73	x		x		x	x	x	x	x

The Adjustment Rating Scale

With the permission of Dr. William Itkin, Director Cooperative Research Project of the Chicago Board of Education, the Adjustment Rating Scale was used by teachers in the twenty communities at the beginning and end of the school year. In the experimental areas ratings were made independently by the research teacher and the regular classroom teacher. Teachers did not have access to the previous rating when the June ratings were made. They had not been apprized of the fact that a second use of the rating scale was to be made so probably did not retain copies of ratings made earlier in the year.

Only nineteen pupils out of thirty-five in the control groups were rated by teachers both in September and in June. There was a bit of fear on the part of teachers to put down a rating lest their own work be criticized. All thirty-seven pupils in the experimental group were rated by the research teachers and all but one of these were rated by the regular classroom teacher. The only exception was in the case of a pupil who was not in regular attendance because of an emotional and behavior pattern which was not conducive to full time attendance. The detailed information for pupils may be found in the appendices.[1]

The gains were as follows —

	Control (19)	Experimental Research Teachers (37)	Regular Teachers (36)
Over-all classroom work	.4	.5	.2
Over-all classroom behavior	—.3	.7	.1
Adjustment to other children	.2	.9	.4
Social participation	.5	.9	1.1

The above figures are average gains in terms of steps on the rating scale.

---

[1] Appendix I

From the results greater gains were made on all sections of the scale by the experimental group than by the control group. The only point at which there was a disagreement of opinion between the ratings of the research teachers and the regular teachers lay in the area of the "Over-all Classroom Work." The research teachers rated the change greater than that of the control group while the regular teachers rated it less than that of the control group.

The research teachers rated the gains on all sections of the adjustment scale greater than those of the regular teachers with the exception of the change in social participation. Classroom behavior improved in the experimental classes and suffered in the control classes. This probably emphasizes the desire for recognition which was more fully met in the experimental classes.

The range in individual gains in terms of steps on the scale was as follows:

	Control (19)	Experimental Research Teachers (37)	Regular Teachers (36)
Over-all classroom work	—4 to +3	—4 to +3	—1 to +6
Over-all classroom behavior	—3 to 0	0 to +3	—3 to +2
Adjustment to other children	—2 to +4	—4 to +4	0 to +5
Social participation	—2 to +4	—1 to +5	—3 to +5

There was wide variation in the range for both control and experimental groups. There seemed to be no set pattern for individuals. Those who made great improvement in one type of adjustment may have made little or no gain in some other type of adjustment.

Table XXX
Correlation Between Ratings
of the
Research Teachers and Regular Teachers
on the
Adjustment Rating Scale

	September, 1958 (36)	June, 1959 (37)
Over-all Classroom Work	.23	.23
Over-all Classroom Behavior	.62	.77
Adjustment to Other Children	.23	.74
Social Participation	.25	.52

As noted in other places one pupil had not been in attendance at school during the year 1957-58. That accounts for the difference in number of pupils rated in September, 1958 (36 pupils) from the number rated in June, 1959, (37 pupils).

The correspondence of ratings of the regular and research teachers became more alike in all areas except in the rating of over-all classroom work. Especially significant are the gains in correlations on ratings of adjustment to other children and social participation. This would seem to indicate that conferences by the research teachers with regular teachers were helping to develop to a greater degree a recognition and appreciation of the factors involved.

A few individuals made much improvement with many not showing too much change.

According to the research teachers five pupils out of 37 seemed to regress on social participation (13.5%) and four of 36 (11.1%) regressed according to the regular teachers; in the control area three out of 19 (15.8%) regressed.

The important fact is that those in the experimental classes did make greater improvement, on the whole, than did those in control groups. The contacts with others of like ability and the opportunity to experience individual attention to a much greater extent did help this experimental group to adjust to a greater degree.

In one of the experimental areas the research teacher gave a test on the Dolch Basic Vocabulary Cards[1] (220 words) in October, and repeated the test in May. All of the twenty-four pupils made gains which ranged from 5 words to 138 words, with an average gain of 48 words.

The results were as follows:

	October, 1958	May, 1959
Range	0—214	10—220
Median score	117	194
Average score	109	157

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[1] Appendix J

Table XXXI

Correlation Charts (Fall, 1958)

Western Control (13)

	CTMM	CAT Read.	CAT Arith.	CAT Lang.	CAT Total	Core Achieve.	S-B
CTMM	x						
CAT Read.	.746	x					
CAT Arith.	.271	.804	x				
CAT Lang.	.136	.588	.638	x			
CAT Total	.726	.945	.908	.707	x		
Core Ach.	.528	.668	.746	.426	.677	x	
S-B	.618	.588	.395	.507	.487	.618	x

Western Experimental (15)

	CTMM	CAT Read.	CAT Arith.	CAT Lang.	CAT Total	Core Achieve.	S-B
CTMM	x						
CAT Read.	—.157	x					
CAT Arith.	—.115	.084	x				
CAT Lang.	.209	.395	—.313	x			
CAT Total	.136	.842	.364	.436	x		
Core Ach.	—.010	.042	—.395	.558	.010	x	
S-B	.280	—.073	.157	.063	.188	.230	x

Central Control (24)

	CTMM	CAT Read.	CAT Arith.	CAT Lang.	CAT Total	Core Achieve.	S-B
CTMM	x						
CAT Read.	.313	x					
CAT Arith.	.188	.416	x				
CAT Lang.	.334	.052	.354	x			
CAT Total	.406	.756	.823	.531	x		
Core Ach.	.518	—.052	.588	.598	.487	x	
S-B	.457	.528	.870	.052	.426	—.010	x

Central Experimental (25)

	CTMM	CAT Read.	CAT Arith.	CAT Lang.	CAT Total	Core Achieve.	S-B
CTMM	x						
CAT Read.	.261	x					
CAT Arith.	.548	.548	x				
CAT Lang.	.344	.219	.598	x			
CAT Total	.598	.736	.219	.697	x		
Core Ach.	.199	—.031	.558	.765	.507	x	
S-B	.167	.178	.344	.507	.323	.178	x

Western (C & E) (28)

	CTMM	CAT Read.	CAT Arith.	CAT Lang.	CAT Total	Core Achieve.	S-B
CTMM	x						
CAT Read.	.230	x					
CAT Arith.	.261	.518	x				
CAT Lang.	.292	.548	.251	x			
CAT Total	.406	.880	.638	.658	x		
Core Ach.	.126	.457	.303	.558	.457	x	
S-B	.416	.395	.416	.436	.436	.406	x

Central (C & E) (49)

	CTMM	CAT Read.	CAT Arith.	CAT Lang.	CAT Total	Core Achieve.	S-B
CTMM	x						
CAT Read.	.261	x					
CAT Arith.	.385	.518	x				
CAT Lang.	.344	.157	.507	x			
CAT Total	.457	.726	.899	.648	x		
Core Ach.	.385	—.095	.467	.697	.457	x	
S-B	.323	.385	.292	.063	.354	.084	x

All Control (37)

	CTMM	CAT Read.	CAT Arith.	CAT Lang.	CAT Total	Core Achieve.	S-B
CTMM	x						
CAT Read.	.467	x					
CAT Arith.	.395	.558	x				
CAT Lang.	.240	.146	.436	x			
CAT Total	.446	.842	.842	.467	x		
Core Ach.	.507	.257	.628	.568	.568	x	
S-B	.518	.608	.209	.446	.457	.230	x

All Experimental (40)

	CTMM	CAT Read.	CAT Arith.	CAT Lang.	CAT Total	Core Achieve.	S-B
CTMM	x						
CAT Read.	.094	x					
CAT Arith.	.313	.507	x				
CAT Lang.	.251	.344	.375	x			
CAT Total	.354	.765	.746	.707	x		
Core Ach.	.178	.042	.323	.677	.477	x	
S-B	.167	.167	.354	.105	.313	.146	x

20 Communities (77)

	CTMM	CAT Read.	CAT Arith.	CAT Lang.	CAT Total	Core Achieve.	S-B
CTMM	x						
CAT Read.	.251	x					
CAT Arith.	.323	.548	x				
CAT Lang.	.313	.334	.426	x			
CAT Total	.385	.813	.794	.658	x		
Core Ach.	.178	.240	.406	.354	.385	x	
S-B	.354	.406	.334	.188	.375	.406	x

Table XXXII

Correlation Charts (Spring, 1959)

Western Control (13)

	CTMM	CAT Read.	CAT Arith.	CAT Lang.	CAT Total	Core Achieve.	S-B
CTMM	x						
CAT Read.	.668	x					
CAT Arith.	.736	.717	x				
CAT Lang.	.677	.756	.608	x			
CAT Total	.736	.756	.823	.785	x		
Core Ach.	.334	.188	.313	.385	.188	x	
S-B	.618	.487	.608	.354	.538	.188	x

Western Experimental (13)

	CTMM	CAT Read.	CAT Arith.	CAT Lang.	CAT Total	Core Achieve.	S-B
CTMM	x						
CAT Read.	—.136	x					
CAT Arith.	.073	.775	x				
CAT Lang.	—.136	.794	.954	x			
CAT Total	.115	.842	.954	.927	x		
Core Ach.	.395	—.052	.219	.292	.209	x	
S-B	.280	.021	.115	.292	.126	—.487	x

Central Control (22)

	CTMM	CAT Read.	CAT Arith.	CAT Lang.	CAT Total	Core Achieve.	S-B
CTMM	x						
CAT Read.	.497	x					
CAT Arith.	.364	.726	x				
CAT Lang.	.406	.467	.518	x			
CAT Total	.457	.746	.785	.707	x		
Core Ach.	.558	.487	.271	.323	.354	x	
S-B	.457	.219	.507	.507	.497	.052	x

Central Experimental (24)

	CTMM	CAT Read.	CAT Arith.	CAT Lang.	CAT Total	Core Achieve.	S-B
CTMM	x						
CAT Read.	.364	x					
CAT Arith.	.736	.558	x				
CAT Lang.	.282	.648	.395	x			
CAT Total	.677	.736	.899	.638	x		
Core Ach.	.344	.457	.323	.457	.497	x	
S-B	.167	.271	.251	.084	.115	.251	x

Western (C & E) (26)

	CTMM	CAT Read.	CAT Arith.	CAT Lang.	CAT Total	Core Achieve.	S-B
CTMM	x						
CAT Read.	.271	x					
CAT Arith.	.303	.756	x				
CAT Lang.	.199	.794	.736	x			
CAT Total	.375	.917	.880	.889	x		
Core Ach.	.251	.209	.344	.354	.344	x	
S-B	.416	.282	.457	.334	.354	.385	x

Central (C & E) (46)

	CTMM	CAT Read.	CAT Arith.	CAT Lang.	CAT Total	Core Achieve.	S-B
CTMM	x						
CAT Read.	.426	x					
CAT Arith.	.528	.648	x				
CAT Lang.	.303	.477	.446	x			
CAT Total	.538	.775	.842	.638	x		
Core Ach.	.426	.334	.240	.457	.334	x	
S-B	.323	.240	.446	.188	.395	.105	x

All Control (C & W) (35)

	CTMM	CAT Read.	CAT Arith.	CAT Lang.	CAT Total	Core Achieve.	S-B
CTMM	x						
CAT Read.	.558	x					
CAT Arith.	.426	.765	x				
CAT Lang.	.528	.668	.668	x			
CAT Total	.538	.880	.833	.794	x		
Core Ach.	.457	.375	.354	.323	.364	x	
S-B	.518	.303	.558	.416	.385	.105	x

Experimental (C & W) (37)

	CTMM	CAT Read.	CAT Arith.	CAT Lang.	CAT Total	Core Achieve.	S-B
CTMM	x						
CAT Read.	.167	x					
CAT Arith.	.477	.618	x				
CAT Lang.	.094	.638	.548	x			
CAT Total	.446	.804	.908	.697	x		
Core Ach.	.292	.344	.271	.487	.426	x	
S-B	.167	.126	.271	.115	.230	.261	x

20 Communities (72)

	CTMM	CAT Read.	CAT Arith.	CAT Lang.	CAT Total	Core Achieve.	S-B
CTMM	x						
CAT Read.	.344	x					
CAT Arith.	.467	.697	x				
CAT Lang.	.282	.628	.548	x			
CAT Total	.457	.823	.861	.746	x		
Core Ach.	.344	.292	.199	.426	.334	x	
S-B	.354	.209	.446	.282	.344	.199	x

Table XXXIII

Average Attendance (in days)

	1957-58	1958-59	Gain in av. attendance	Median Gains
Western Control (11)	149	170	21	8½
Western Experimental (12)	166	167	1	3½
Western Area (23)	157	169	12	7
Central Control (20)	166	169	3	3
Central Experimental (24)	150	166	16	8½
Central Area (44)	157	167	10	3½
10 Control Communities (31)	157	169	12	4
10 Experimental Communities (36)	156	166	10	8½

In the western area the control group made a far greater gain in average attendance than did the experimental group (21 days compared with 1 day). On the other hand, the central area experimental group made a much greater gain in average attendance than did the control group (16 days compared with 3 days).

For all control groups the gain was an average of 12 days as compared with 10 days for the experimental group.

The range in gains was as follows:

Table XXXIV

Range in Gains in Average Attendance

	Days	No. Gaining	No change	No. Losing
Western Control gain (11)	—3½ to 67	3	1	7
Western Experimental gain (12)	—16 to 18	5	1	6
Western Area gain (23)	—16 to 67	8	2	13
Central Control gain (20)	—30½ to 35½	6	3	11
Central Experimental gain (24)	—23 to 82	6	3	15
Central Area gain (44)	—30½ to 82	12	6	26
10 Control Communities (31)	—30½ to 67	9	4	18
10 Experimental Communities (36)	—23 to 82	11	4	21

Advantages and Disadvantages of the Program

Some mention of the advantages and disadvantages experienced by the research teachers should be made.

Disadvantages

The classrooms allotted for use by the special class were in some instances the combinations of teachers' lounge and principal's office and/or a section of the cafeteria. When this was the assigned place, the room was too small to be adequate for even a small class. Inadequate lighting, heat, ventilation, and the continuous interference of the telephone were some of the annoying situations. Seldom was provision made for the safe keeping of confidential professional papers and records. Some of the rooms used as special classrooms were inclined to be noisy, so the quiet atmosphere that is most important was lacking. The room should be conducive to good working conditions.

Since the regular teachers were already carrying the burden of too large classes or combination grades, it was found that lack of continuity in lessons was still a draw-back to the research program with the educable mentally retarded pupils. In an itinerant program where a teacher meets her class only one or two days a week, it is difficult to maintain continuity in both the regular and research teacher's programs, and much time is lost in reconstructing and reviewing. It is also difficult to carry out a long-term unit of instruction effectively; consequently, it is necessary to plan in units of one day. This meant that research teachers had to spend a great deal of extra time in planning.

On stormy days when research teachers might have a long distance to go for the day's program they had to start so early that oftentimes principals could not notify them in time when there was to be no school in the town. This meant a long drive with little accomplished that day.

Research teachers found it difficult to transport some of the bulky materials which they needed.

As vacations in the various school systems did not always coincide it meant that the research teachers had to take their vacations in a piece-meal fashion.

Regular teachers who were residents of the town were often too close to the situation and so did not always recognize the needs that the special teachers saw.

The pupils in some schools had not been sufficiently informed of this research project to accept these special class children and their rightful role in this experimental research. This created a social problem for the special class children, a situation that required delicate handling, time, and patience to bring about pupil-pupil understanding. As soon as this was accomplished, it was a delight to note the social gains made by these retarded children.

Advantages

The one day a week the retarded pupils spent with the research teacher gave the regular teacher a day to carry on her regular routine of study with a free conscience. No one was being neglected. The children were happier and better adjusted for they finally had work at a level where they could accomplish academic work successfully.

Regular classes which have been overloaded with exceptional children prohibited the conscientious teacher from giving even a few extra moments of help to the children who were in such dire need of this attention. This burdened teacher was grateful for the helpful suggestions concerning the type of lessons, work, and techniques of teaching to use during the remainder of the week with retarded pupils within her regular grade. Lessons geared to the individual's ability will help to prevent behavior problems. The teacher realizes that children differ in ability and achievement just as much as they differ in physical characteristics. She tries to understand each one and to plan his academic work accordingly. In so doing she is giving this heretofore neglected child some valuable personal attention that will help him to establish his self-respect, self-reliance, and self-confidence.

The parents of the children who took part in this experimental research project and the communities quickly began to realize the countless benefits of special classes and their value to these mentally retarded school children. This led to better home, community, and school relationships. If continued neglect is allowed, the community is faced with numerous problems, major and minor, to keep these retardates in line as respectful law-abiding citizens. Undoubtedly some of these borderline retarded folk will marry and have families. Therefore, they must be properly cared for, wholly or partially, either by their families, town, or state, if they have not been trained to be self-supporting. As shown in this one day a week program greater academic achievement has been made than that achieved in the regular classroom.

Recommendations for Rural Communities Planning Future Programs

Rural communities planning for future programs with special classes should realize that the program of work for any special class cannot be a definitely prescribed one. It will change and vary from term to term and from class to class. The needs of each class are derived from the needs and abilities of the individual children included in each particular class. The long range program includes the functional goals based on individual needs.

Other considerations in the organization of special classes with respect to age range is the length of time a pupil will be in school, the pupil's health habits at home and at school, what his place will be in the community, and the development of desirable working habits and attitudes.

The experiences encountered by the itinerant research teachers prompt the need for keeping in mind the following suggestions in weighing the qualifications of the teacher selected for the special class.

The first consideration is the teacher's educational background. Has he had sufficient advanced training to teach these special children? Does he have a well-founded knowledge of child growth and development? This is necessary for a special education teacher. With this knowledge he is better able to take a long-range view of the developmental processes. Will his health, physical and mental, allow him to carry on satisfactorily? These frustrated youngsters readily adopt the habits of their teacher. Thus the teacher should be a calm, happy, cheerful, interesting, well-adjusted person. Will this teacher be able to meet the civic demands of the community and have the ability, dignity, poise, and tact to present and evaluate the program as it is and as it progresses? Cooperation with sound understanding of the duties and problems of health and welfare agencies as regards the well-being and safeguards of the mentally retarded population will bring about better public relations. It is important that the special teacher should have a thorough understanding of rural life.

That there will be "spice" in the program, the teacher of special classes should be given a knowledge and a value of music, art, and crafts, and the important part they contribute to the training of these retarded children. The teacher should have the ability to lead, instruct, and develop these talents to the fullest extent, where and when potentialities become evident. Often this type of child is quite adept in one of these areas.

Taking into consideration these facts, the community planning to establish a special class should thus be prepared to offer a well qualified teacher a salary attractive enough to warrant said teacher a satisfactory livelihood to meet the economic needs and demands of present day family living.

The administrators and special education teacher should give thoughtful consideration to the development of and arranging and planning of a curriculum guide. The teacher's cumulative record of the children's progress towards cific attainments or competencies and their current needs will furnish the basis for selection of work. This is also aid to planning by succeeding teachers.

Units for children in the primary level with a chronological age range from seven to ten years

At this level children are taught or given the opportunity to experience actual " doing ", " thinking ", and " feel- ;" in relation to their environment at home, in school, and in public. The teacher will bear in mind that at this age el the daily activities of lunch, rest, work, music, art, and play offer invaluable channels of growth. There will not a place here for reading or numbers until the child is ready. The main emphasis should be placed on an extensive diness program.

Intermediate age group unit from ages ten to thirteen years

At this level work will provide a variety of learning experiences related to everyday interests and problems. The demic work should be adapted to the interest and ability of each. This group should reach its level of potential lity in the learning skills. The enriching experiences of group one should continue.

Junior high group from thirteen to sixteen

The academic levels can be better adapted to the individual needs as potentialities and abilities are recognized by teacher and others in contact with the individual. The qualified teacher in special education knows that children learn doing and that we will teach by building on the foundation of each child. At this age level learning is beginning be more meaningful even to the retarded child.

The junior high group should continue in the academic skills, but this work should be integrated with an occupanal program. This could include learning about types of work available in the unskilled or semi-skilled routine areas, veys of local areas for such job opportunities, with field trips to these areas, sociograms and social gatherings to develop od personal and social attitudes and opportunities to learn the value of money.

Adults dealing with retarded boys and girls realize they need guided, firm, well-planned instructions, by means which they will be able to perform good routine work habits. They will learn to accept constructive criticism, to be edient, and to work as efficiently as possible. The teacher is the key person in building curriculum.

In summarizing this report of experimentation in the learning potentialities of the mentally retarded in the rural as of Maine, it is a recognized fact that there is a growing awareness that a successful special educational program not be carried on without qualified teachers, and that there is a great need for the educable mentally retarded child be given his rightful educational opportunities and benefits.

An illustration of what was done by an interested public-spirited person in a community follows. This person had de arrangements for the activity prior to carrying it out.

Mr. Pumpkin and the Naughty Goblin

Four pairs of eyes lighted up as, on entering the little cottage classroom, they saw Mr. Pumpkin sitting on the study le with a note tucked under his jaunty twisted stem. Nearby were carving tools.

Beside Mr. Pumpkin and the tools was a cornucopia containing Halloween candy and a toy horn for each child. ese got secondary attention later in the day. Right now the note under Mr. Pumpkin's chin was most intriguing.

Merle, the baby of our special class, reached the note first and brought it to me. It was addressed, " Pumpkinville, ine, October 30, 1958. Dear Teresa " —

" It isn't mine," I said. Instinctively he took it to William, our big boy and the answer to many problems. Though lliam seldom smiled those first days, his eyes were smiling as he read " Dear Teresa, William, Merle, and Evans, I a big pumpkin. I want to be made into a Jack-O'-Lantern. Tomorrow is Halloween. Will you children make me a Jack-O'-Lantern?

There is a candle inside of the yellow and black box on the window sill.

After you have made me, put the candle inside of me.

Thank you,
Mr. Pumpkin "

Evans, our **other** little boy, beat everyone to the yellow and black box. No candle — a note instead — he took it to Teresa. Both she and William feigned dignified amusement at the wide-eyed wonder of the little ones as she read,

"Goblinland

Day before Halloween

Dear Children,

I got here first. I am a naughty goblin. You can't see me. I like to play games. I have taken Mr. Jack-O'-Lantern's candle and have put it under the teacher's bell.

You will find it there.

Mr. Naughty Goblin"

This time my quiet Teresa almost, but not quite, beat Merle to the bell. At a glance they knew there was not room for a candle under the bell — another note? — what an exciting game!

Note #3. "You are fooled again!

There isn't room enough for a candle under this little bell, is there? Look in that long box on the shelf under the clock.

How I love to play games on Halloween.

Naughty Goblin"

The long box! Evans this time.

Note #4

"Dear Children,

Did you find the candle in this box? No!! Well, what do you know? Guess I must have put it somewhere else. Why don't you look in the middle drawer of the teacher's desk. Maybe I put it there.

Naughty Goblin"

By this time Merle and Evans could hardly wait for the end of the note, and were becoming very vocal. Teresa was laughing, William with his big brother smile was enjoying the responsibility of reading the notes.

The teacher's drawer is big. The candle must surely be there. A little rummaging brought Note #5 to light.

"Not in here either — well, how do you like my naughty little game? I'll bet Mr. Jack-O'-Lantern will have to go without his Halloween candle —.

Just take a peek inside of the little gray cupboard in back of the stove — I live in there around Halloween time and maybe you will find it there.

Naughty Goblin"

One giant step took all four children to the little door behind the stove — and there — at last was the big red candle that would bring Mr. Pumpkin to life when he became Mr. Jack-O'Lantern later in the day.

Under the candle was Note #6.

"Dear Children,

I have had a lot of fun with my naughty little game. Tomorrow is Halloween. Put the candle in Mr. Jack-O'-Lantern. He will like it.

I like to play tricks on people. Good tricks are fun. Naughty tricks are not fun.

I think good tricks are more fun than naughty tricks. I am going to do only good tricks this Halloween.

Will you children do only good tricks?

Naughty Goblin"

What motivation for the ensuing discussion of what good tricks we could enjoy on Halloween!

Later in the day more learning experiences resulted besides the reading lesson we'd had. There was the measuring of art paper to make patterns for our Jack-O'-Lantern face, choosing the one we wanted after the art lesson, transferring it to the pumpkin, and spelling and writing for carving directions. Through this experience safety was taught in the handling of sharp tools; responsibility in delegating safe chores to small people; and the satisfaction of the finished product. More safety teaching took place when we exchanged the lighted candle for an outdoor light before we set him on the outside steps to remind passers-by that this was the home of Mr. Jack-O'-Lantern and the Naughty Goblin.

This type of activity could be used at many seasons of the year emphasizing different qualities that a teacher wished to stress in character building.

Another illustration showing cooperation with outside agencies is a letter expressing appreciation by that agency of what was being attempted in the program.[1]

Another welfare case worker made two trips to visit the research teacher in order to get information regarding three state wards so that his department could make more adequate plans for those children. He also expressed his appreciation of the interest shown toward these children in the special project.

Human Interest Stories

Many of the results of this experiment cannot be measured by any standard test but these abstract gains will be felt and observed by the families and communities now and in the future.

The case studies which follow were written by the research teachers. The first thirteen were written by Mrs. Worcester and the last twenty-four by Mrs. Bryant. They are based on real cases, but the actual names have not been used.

Barbara Smith

Grade 7

C.A. 13-9 M.A. 9-0 S-B I.Q. 67

In September, 1958, when Barbara came into the special class, her manner indicated a nervous, tense, unhappy girl.

As our classes began to increase in length and depth she began having stomach aches. This was reported to her regular teacher and revealed that she was doing this to get dismissed from school. About the third attack, the research teacher took Barbara aside and had a heart to heart talk about her home life and her feeling toward school.

There are seven in the family. Some are married and two older sisters are being married this spring. Her mother is an unusually large woman, who "enjoys" poor health, so it is difficult for the mother to move about too much. Barbara feels that she will soon be the only girl left at home and this is going to bring a lot of hard work for her to do. Often Barbara is kept home to carry water from an outside well for doing the family laundry.

A home visit was made one day when Barbara was kept out for work at home. The mother was sewing a patchwork quilt. This was mid-afternoon and she was attired in a nightgown with a sloppy dress over it. She made apologies for an untidy house by saying that Barbara had not had time to get the work all done on wash day.

Mrs. Smith is a good mother, I think, but does not understand academic work. She says she gathers the children about the family table in the evening, standing by with a club, and says, "They are going through grammar school if I have to drive every one of them with my stick." The father can neither read nor write and does not see why they should go to school if they want to quit.

After this home visit, I could understand better why Barbara was so reluctant to admit she needed help or that she did not understand explanations about doing her lessons. As soon as she realized there was no punishment for them, her questions began to bubble forth and her fear of making errors faded fast. In this more relaxed attitude Barbara began to improve. Improvement was first noted in her oral reading; then arithmetic took on a new light. She enjoyed health science most of all, especially the study of foods and our bodily functions.

Barbara is a neat, attractive girl. She worked in the school cafeteria to pay for her daily lunch. The cook reported that Barbara was very efficient. She took much pride in our classroom and enjoyed changing and planning the monthly or seasonal decorations.

Spelling is one of her lowest areas of work, but she does not realize this. Her vocabulary is low too.

The regular teacher reported that he could see a big improvement in the study habits and results were rewarding to both of us.

Barbara needs a firm hand to control her social life. The incoming principal is aware of this and is also capable of handling the situation. She also knows of all the work given this year and says this is going to be invaluable to her in Barbara's eighth grade work.

A thorough physical examination showed that Barbara had quite a serious heart condition.

Barbara did not gain in academic achievement on the CAT but did gain 62 points on the Core Achievement Tests. Progress had been made in assimilating general information.

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[1] Appendix M

Blake Briar

Grade 3

C.A. 9-1 M.A. 6-2 S-B I.Q. 64

When Blake came into the special class it was with the idea that he was "dumb" and his prime interest was to have fun in any way he could derive it. By Thanksgiving time Blake began to realize that school could be a very enjoyable place in which to be. His participation in classroom discussions and his interest in academic work began to improve. He was taking books home. Following this marked progress came interest in all other areas of the work. Science was his favorite subject. He contributed much in the units on science and health by bringing articles and materials from home.

The mother worked during the day in a dress factory in a neighboring village, but the research teacher was able to make one home visit. The mother was anxious to cooperate in every way that she could. She stated that it was quite a hard thing for them to accept the fact that their son was placed in this special class but if it was for his good they were glad to have him in the program.

During the year Blake had several long absences because of a major cut on his right hand and a complicated case of appendicitis. In spite of this his gains were satisfying. Blake made 1.0 of a year gain in achievement on the CAT and gained 49 points on the Core Achievement Test scores.

His interest in general was amazingly improved. His self evaluation had risen greatly.

Carl Ricker

Grade 4

C.A. 14-9 M.A. 8-0 S-B I.Q. 56

Carl was brought to school the first day by his father, who is a Game Warden. At this time the father gave the research teacher a nearly complete history of Carl's life. He told of no unusual facts, except that recovery from whooping cough had been the time they had first noticed that Carl was varying from normal. One would only need to see that this was the belief they had taught themselves, for Carl has the facial appearance of mongoloid features. Actually it was found that the birth was far from a normal one.

Even though his testing placed him in the age level of eight years, it was found that he carried on more as a five or six year old.

Because his parents have worked and struggled so desperately, Carl has developed a fair but very short attention and interest span. He is most courteous and quite thoughtful of others, if he likes them. His memory is surprisingly good in nature study, which is again the result of the teachings of his father.

Carl's main interest was to have his lunch at recess time. The lunch consisted of several sweet cakes and a bottle of soda pop. When the class went for cafeteria lunch, Carl had a double order of everything. Then he wanted to lie down to rest. He was listless and disinterested in all work and activities for the remainder of the day.

Carl was always very neatly dressed, an evidence of much drill in personal hygiene habits and home environment.

His parents catered to his slightest wish and he was definitely pampered beyond any benefit even for a normal child.

Carl could read well, but with his speech difficulty could not be understood. He could not retell beyond a second grade level.

He liked coming to the public school as he enjoyed the social elements. It was only under a very watchful eye that it was safe for him to play with other children, since he did not know his strength and there was danger of his hurting the children in their play.

Carl has had home instruction for several years. In discussing his present and future with the instructor, it was agreed that Carl has reached his potential. The research teacher consulted with the parents and advised them to give Carl some small duties about the home. Raising chickens might be a good project because Carl likes animals and country living and needs responsibility of some kind.

Carl has a brother in grade three.

Carl gained 0.6 of a year in achievement on the CAT and gained 4 points on the Core Achievement Test scores.

Carrie Enden

Grade 7
C.A. 14-8 M.A. 8-8 S-B I.Q. 62

Carrie, an Indian girl, was a State ward living in a foster home. However, her parents are living, though the father who is in very poor health, has been hospitalized for a long period. This information was volunteered by Carrie and verified by the welfare worker. One of her older sisters lives in the same foster home with her. They call the foster parents mother and father.

Carrie did not like school and one could hardly wonder at that. She had almost no concept of arithmetic even at the simplest level. She read fluently, but it was meaningless to her. Her memory span was extremely short. In working with Carrie the research teacher was forever on the alert for the teachable moments. This was true more for her than with the others, for her interests were all but non-existing.

After a while Carrie was convinced that it would be fun to redecorate our classroom. This involved many areas of work. Thus she came to realize that it is meaningful to go to school. From then until the end of our school year Carrie's pride and joy was to beautify our school and to keep it tidy.

She had some physical defects, such as deafness and a heart condition. Carrie was cognizant of these and would not exert herself beyond her limits.

She was very lax with her personal hygiene but numerous " heart to heart " talks helped to improve that situation.

Before school closed Carrie had decided that she was going to finish grade school and maybe try high school. Of course this probably will not materialize, but her whole concept of learning and its importance to everyone was leading her into proper channels of thinking.

Her foster mother told the research teacher she could see a big improvement in Carrie's attitude toward the outlook for her future.

Carrie did not gain in achievement on the CAT but she did gain 15 points on the Core Achievement Test scores. Social gains were greater than academic gains.

Gates Arden

Grade 8
C.A. 14-4 M.A. 10-2 S-B I.Q. 73

A report on Gates would mean writing a book and an interesting one too.

After the first interview with Gates' teacher-principal, the research teacher could not help but wonder how one fourteen year old boy could possess so many wrong qualities. There was but one thing in his favor, according to her, and that was that he was always present.

For every misdemeanor in the entire school Gates was the first to be accused. This seemed to be the reason he was always so antagonistic and rightfully so in his case.

Subconsciously Gates craved personal attention and praise. It is supposed this was due to the fact that in all his school experiences he had met with failure and criticisms he did not understand. He liked the sociability of school but loathed the subject matter in which he was markedly overgraded. His logical reasoning concerning everyday living was good. In crafts he was truly quite clever. He made lovely Christmas corsages. He longed to be able to draw as well as his research teacher. It is felt that he loves art. He said one day he wished he could actually make dishes. This came during a period of working with modeling clay for the building of a Lincoln cabin.

In oral mathematical work he could do more than expected, but he was an absolute non-reader.

This greatly bothered Gates. Many times he would ask the research teacher if she thought it possible for him to learn to read just a little bit in one year. One morning Gates greeted her with this statement: " You know how you have yapped about READING? Well, now I even dream about it." After many trials, much tribulation, and hours of patient instructing Gates did learn to read several stories in a pre-primer book. At that time he explosively exclaimed, " By God, I did read, didn't I?" I said, " Yes, Gates, by God you did." After that he literally pored over his book. His parents were very much pleased and proud that he had accomplished this.

Gates' numerous stories about home events were vividly and colorfully told to the class. For once in his life he had a chance to express himself. However, he had to be restrained in his use of certain adjectives. Profanity was his only vocabulary. This was quickly but not easily corrected during school hours.

He learned to respect authority, to conform to the teacher's wishes, and was forever showing his thoughtfulness to the research teacher and the other three in his class.

The research teacher visited the home several times. The mother was very cooperative, but because of limited academic capacity, could not help too much.

It was a country farm home with no modern facilities, but as clean as could be expected.

Gates' education is complete now that he is socially graduated from grade eight. He will go to work in the woods and earn his daily bread.

Gates did not show academic improvement on the CAT, but did gain 46 points on the Core Achievement Test scores. There was definite improvement in his general information.

Hilda Rowe

Grade 4

C.A. 10-2 M.A. 6-10 S-B I.Q. 67

Hilda was quite the opposite of her sister, Hope, who was somewhat aggressive. Of the two Hilda was much better dressed and her personal appearance was neater and somewhat cleaner. Judging from all conversation, she is the fair-haired one of the entire family, and knows it. Often she came showing treasures that her father had brought to her.

From cumulative records it was learned that Hilda had impaired hearing and a slightly deformed pelvic bone. Although her I.Q. was three points lower than Hope's she was the better student. She grasped the meaning of instructions much more quickly and accurately than did Hope. Her handwork was always neatly done. She also began to realize the need of keeping her desk in order. Serveral times she mentioned the decorations that were placed in the room. She kept the toilet room clean, washed the mirror, lavatory, stool, dusted the floor, etc. It was hoped some of this training would carry home. Hope cared for the reading nook. Never once during the year did they carry out their duties unless told to and closely supervised.

Hilda could read quite well, but was slow in getting mathematical concepts to stick in her mind for more than a short period of time. She seemed quite interested in the study of foods and health and science, whereas Hope had no particular interests.

Both of these children had a noticeable speech difficulty, but it seemed it was purely from the habit of baby jargon practiced by the entire family.

As spring came and our wild flowers began to bloom, Hilda came each Monday morning with a nice bouquet for the desk. She also told me her mother was painting and papering their house. The research teacher did not make a home visit as the nurse and school principal suggested it would not be of value.

Certainly Hilda gained many points concerning home life as it should be in the way of cleanliness, social manners, togetherness, thoughtfulness for each other, helpfulness, etc. She seemed proud to report that she had told her parents about our lessons on Home Living.

Hilda made 0.9 of a year's gain in achievement on the CAT and gained 30 points on the Core Achievement Tests. Her greatest gain was in reading vocabulary in which she showed a gain of 1.8 years.

Hope Lane

Grade 2

C.A. 8-7 M.A. 6-0 S-B I.Q. 70

Hope had many strikes against her before she got started. She is the fifth in a family of eight. The family is cared for by the town. The community nurse and school physician are frequent professional callers on the family.

In January the entire family was afflicted with impetigo which lasted many weeks. This occurred at the time of the birth of the eighth child. Medical attention was given.

Early in the fall, it was made possible by pressure for this family's five school children to have lunch at the school cafeteria. Because of health, Hope missed 30 days out of 180 in the school year.

Her finger nails were eaten to the extent that only a slight portion of nail remained. This factor was investigated by the nurse.

Hope got little attention from the regular teacher. " She is a quiet child, keeps busy all day and is no trouble. I shall see if I can hear her read once in a while and assign some room duties." The teacher feels she made great strides with Hope but this was not until late in the spring term.

The findings were that Hope had a bad emotional block. She was like a frightened little animal. Why? It was learned through the nurse and another teacher that the older children were allowed to correct the younger children by way of rough treatment. In doing a lesson Hope would cringe if the teacher attempted to instruct or correct her. It is believed that the preceding statement is the reason.

However, Hope did learn not to fear the research teacher and began using quite relaxed habits of work. Her attention improved as well as her interest. Her finished work in writing and her workbooks in reading and numbers showed good progress had begun before the close of the school year.

One problem that kept Hope from being herself was that her sister would always try to give her answers and do her work. The research teacher questioned the sister about this habit and her answer was that Hope didn't know anything. This habit was finally discouraged.

The appearance of both children impressed upon the teacher the fact that they were neglected. Their clothing was poor and not in accordance with prevailing weather conditions.

On the playground no amount of tempting or coaching could budge these children to play with their classmates. They would locate their brother from grade one and an older sister and stand at one side. The teacher did much to promote social improvements. Her results were just beginning to show. Hope made 0.3 of a year's gain on the CAT and gained 21 points on the Core Achievement Tests.

It is strongly felt that all in all this year has helped to give this child her first sense of self-reliance and the possibility of being a real person. Often a glint of life sparkled in her eyes. Usually they had been as dull and expressionless as a half-alive puppy.

Merrill Moore

Grade 5

C.A. 9-11 M.A. 7-0 S-B I.Q. 71

The first impression of Merrill was, " What in the world is wrong with this child that he can't sit still for one single minute?" He was such an eager little fellow to do right and to be the first one done. Nothing would interest him for more than a few moments.

He was given special duties like keeping the reading table in neat order, keeping a library card for each pupil so one could tell which books were read and how many were read. What project in science did he feel would be most beneficial to the group? These details began to slow him down. This technique was continued and the results were amazing.

The regular classroom teacher asked what kind of a magic spell had been cast over him as this quieter attitude carried over to his daily classroom habits. He soon learned that his haste meant doing over many simple tasks and that getting through too soon brought no rewards.

Merrill's personal appearance told of motherly neglect in personal hygiene training. His clothing was never too clean. He told of sitting up to see the late, late show on TV; getting up early; breakfasts of coffee and cookies. When he brought his cold lunch, it was a scant and poorly planned one. The research teacher spoke to his mother about his getting more rest, and also about having his eyes checked. Merrill had the habit of squinting and rubbing his eyes frequently. He also asked to move closer to the board even though he was sitting very close to it at all times.

Both parents work at a nursery about twenty miles from home. The home is cared for by an elderly uncle. Merrill has an older sister in grade six; another sister who is repeating grade one, and a three year old brother.

The research teacher visited this very destitute home several times and the mother came to visit the class once. She seemed anxious to do the proper things for her children, but still she did not have Merrill's eyes examined. The research teacher spoke to one of the townspeople, hoping someone could encourage this project through the community, but was told by one of the teachers, a life long resident of the town, who is active in civic affairs, that the family was very proud. At the close of school nothing had been done. It is still felt this is one factor that is causing Merrill to be so restless.

Academically, Merrill did quite well when he settled down to work. He did his best work in mathematics and reading. Comprehension and logical reasoning were good. He gained 0.5 of a year on the CAT and also gained 25 points on the Core Achievement Test scores.

One day the research teacher convinced Merrill that it would be heaps of fun to finger paint. Paint was made from soap powder and liquid starch colored with tempera paints. No words can express his delight. He made a scene of a forest fire in the town; then he put it out. He left out no detail. One of the teachers was in during this time and she too became excited seeing how wonderful it was for him to express himself freely and how quiet he became. This was found to be a great outlet for pent-up emotions.

Newton James

Grade 6

C.A. 12-1 M.A. 8-6 S-B I.Q. 70

Newton was a nice looking boy, but truly apathetic.

His father is in the navy and was only at home over the weekend. Newton needs a kind, firm, understanding, and patient father.

His mother fully recognized Newton's emotional problems and has taken her son to a highly recommended psychiatrist for diagnosis and treatment.

Newton most certainly had a " hate-phobia." He is a twin and has an older sister too.

The home was rather untidy and poorly furnished. The mother was very ill-at-ease all during the visit by the research teacher. She kept making apologies all during the research teacher's visit for the way the house looked. Her eyes were rather sad and seemed to tell a story that would indicate an unhappy life. She did not mention her husband's support in the search of help for Newton.

It was not until the last of April that the research teacher felt she had begun to penetrate Newton's shell which he had built around his world. He showed some signs of accepting her teachings about life and home and the part that each and everyone is born to play.

He had entered the Boy Scout program of his community and had gone to church several times since Easter.

He brought wild flowers to the research teacher from one of his " hermit walks." This was a big thing for Newton to do. He exhibited an unusual interest in and love for animals.

Newton did not gain in achievement on the CAT but did gain 100 points on the Core Achievement Test scores. Emotional tensions have lessened and general information has increased.

Phyllis Holden

Grade 8

C.A. 15-10 M.A. 9-10 S-B I.Q. 69

Phyllis is highly emotional and sits tearfully most of the time. When questioned about the cause of the tears she simply says, " I am all upset."

After a visit to this home it was felt that the father was a domineering person and that his ideas were carried out regardless of whether they were beneficial to Phyllis or not; yet Phyllis is his sole interest. She is the youngest of several girls in the family.

Phyllis tries very hard to carry out the wishes of her instructors. She has not learned to accept criticism constructively. It is believed that is largely the reason for many of her tears.

Her hand work was neatly done and her personal appearance was neat and clean. Her home is immaculate. It is thought Phyllis gave only minor help with the home duties, not because she isn't a willing worker, but because it is not expected of her. Perhaps she may not be allowed to do things at home.

Phyllis did not socialize with the others in her group. Her excuse was that she would get nervous. Toward the last of the year she was able to sense a joke and laughed quite a lot. She often spoke of enjoying her day in special class and how differently she felt toward school at this special time, not realizing it was because she was getting some personal attention and the work was at her level. Phyllis gained 0.3 of a year in achievement on the CAT and 50 points on the Core Achievement Test scores.

The research teacher felt rewarded for her work when she saw her smile, working in a relaxed frame of mind, and in this situation it was again suggested that Phyllis be made a helper in all home life and be given some responsibilities for home tasks.

Walter Kramer

Grade 3

C.A. 9-4 M.A. 6-2 S-B I.Q. 62

There is no doubt that Walter was the most emotionally disturbed child in the experimental classes.

At the beginning of the school year his attention and interest span were almost imperceptible. Walter's only interest, if it could be termed that, was to touch everything he saw and ask an untold number of questions. Actually this was just a habit of asking " Why?" " Who?" " What for?" because answers were meaningless to him.

He had no thought of ever completing a task no matter how simple it might be. He had no respect for the property of others or for his elders. He did not conform to any rules or regulations, in classroom or elsewhere. Reports from the regular classroom teacher were such that the entire community believed that Walter should be in an institution or sent away to a special school. Even his mother was thinking in terms of such action. The research teacher had many conferences with her about Walter's whole environment at school and at home and his acceptance in the community.

The regular teacher did, after much high pressure salesmanship from the research teacher, realize that Walter had more ability and greater potential than anyone had ever been willing to recognize.

Walter's behavior pattern by June, 1959, was greatly changed. He seemed to enjoy performing his tasks to the best of his ability. His interest and attention span increased remarkably.

His improvement carried over to his behavior in his regular classroom and home life as reported by both his mother and his regular teacher. It is certain that Walter was at last being accepted by classmates as a regular participant in school activities. This feeling of belonging was very beneficial to Walter's whole outlook on life. Walter gained 0.6 of a year in achievement on the CAT and gained 60 points on the Core Achievement Test scores.

Webster Dow
Grade 4
C.A. 9-8 M.A. 7-0 S-B I.Q. 72

Webster was a cute little fellow with black hair and snapping black eyes. He always greeted the research teacher on Wednesday morning with a nice compliment about her clothes, asking what we were going to do for work for the day, etc.

To look at him it was hard to believe that he was mentally retarded. He read hesitatingly but well. His penmanship was a work of art. Arithmetic was hard for him to understand. He had a keen interest in the study of the history of the State of Maine and also showed interest in the program of health-science.

Webster would invariably bring research materials from home. Certainly this was the result of his father's interest. It was believed that Webster's academic failure was due to the fact that his father was a perfectionist. Knowing this, Webster feared making errors. He would just sit, if he could not do his assignment. He would never admit he did not understand; he did not ask questions. Again this was the result of home environment. An effort was made to help him face the big wide world. Webster gained 0.9 of a year in achievement on the CAT and 46 points on the Core Achievement Test scores.

The research teacher was invited to the home several times and always came away feeling sorry that a father could love his family so much yet do them so much harm by being so domineering.

Yvonne Samson
Grade 3
C.A. 9-7 M.A. 6-8 S-B I.Q. 70

Yvonne was so timid and shy when she came to the special class in September, that it was pitiful. The first few times she sat with her head down neither doing nor saying anything. About Thanksgiving time the research teacher detected a sign of a smile in her eyes. She was strongly urged to tell the class about some exciting experience from her regular class. This seemed to please her and soon she came bringing a friend and asking permission to show him some of our working materials.

It was soon discovered that Yvonne's work habits were very, very slow. This was preventing her from accomplishing all of her work. She would discover she was behind and then get a nervous upset; thus the day was ruined. By January this habit was fast disappearing, but she still needed many promptings.

Yvonne and a sister live with their grandparents in a poor country home. Finances are low, too. Her father was burned to death in an auto accident. Her mother is in Connecticut with two other children. Yvonne is cognizant of these family facts and, since she is a sensitive child, it has left its mark on her. She is actually sad. There are no smiles as become a little brown-eyed girl of nine.

In reading Yvonne does exceptionally well; word meaning is pretty good too. Her mathematical concepts are not as good, but there is some improvement in understanding in following instructions in her workbooks. She had such a fine time the day she made some finger paint. "You mean I may do anything I want to?" "Yes, you may." "I don't know what to make. May I make a red cow and then mess it all up?" "Yes, Yvonne, you are free to do as you wish until the recess bell rings." "Isn't this fun!"

Yvonne has a bad nasal condition. She never once had a handkerchief. It was quietly suggested that she take some tissues and go into the girls' room and clean her nose so she wouldn't sniff. To mention the number of times each day that this was necessary, would be difficult.

She didn't seem to have a good memory about bringing material from home, yet it was felt it was because her grandmother would not have the things for her because she seldom forgot anything around the classroom.

Yvonne gained 0.3 of a year in achievement on the CAT and 26 points on the Core Achievement Test Scores.

One day this once shy little lass came and put her arm about the research teacher and said, " Mrs. Research, you are so nice to everyone. I like you a lot. Do you like me too? I have so much fun now. I can show the other girls how to play new games. I like my teacher, but I wish you could come every day."

She learned to smile, to enjoy the beauty of nature, to play games with others, and to enjoy music. It is certain that this has been a red letter year for Yvonne.

Bertrand Cook

C.A. 7-0 M.A. 5-0 S-B I.Q. 71

Bertrand, a little Indian boy, had been in a foster home since he was two years old. He was now seven with a mental age of five years. He was extremely active, and was going through the inquisitive period of most five year olds. He was an outgoing child, loved everyone, and was loved by all in return.

He had been retained in the first grade, against the better judgment of the foster mother, who felt he needed sterner discipline. A home visit by the research teacher did little to convince her that Bertrand's promotional problem was being properly handled. Before the year was over her attitude changed and she was very cooperative. The fact that the foster mother's grown children had been honor students and had been quite strictly disciplined in a private school added to her conviction that Bertrand needed only discipline to " catch up."

A strong readiness program was started. His exuberance was not curbed but slowly brought under control by substituting interesting activity. At the beginning he jumped and ran to the window every time a car went by. As he became interested in working out projects in family living by building homes with blocks, working with the community " stand-up " helpers and making murals of community activities, his attention span grew and he was much quieter.

He was interested in all activities within the room and soon learned to contribute to class discussions and experiments in health and science.

He enjoyed working with the manuscript letters and before the mid-year he would match all of the alphabet from the wall chart at one sitting. He learned most of the letters and could use them in writing simple words.

By February Bertrand's teacher reported definite progress in reading, number concepts, and attention span. By now he was reading a primer and feeling very proud of his accomplishments.

An unfortunate situation developed about the middle of the year. He discovered that the foster mother was about to give him up. He said very little at school but at home began watching for the social worker's car. One day when he thought he saw it, he disappeared into the woods and did not return until after nine o'clock.

A conference was arranged with the case worker and it was decided to let him remain until the close of school. Meanwhile, the foster mother was prevailed upon to part with an older sibling, who, it was felt, was better prepared for a change of homes, and keep Bertrand who would benefit more from a farm home where the foster father could help in his occupational training by teaching him simple farm tasks.

In spite of his low mental age, Bertrand's academic progress was steady. It is felt that the importance of putting this child in a special class very soon could not be underestimated.

While Bertrand's average academic gain was only 2 months for the year on the CAT and 50 points on the Core Achievement Test, it was felt the strong readiness program would make it possible for him to begin a reading program next year and progress at a rate consistent with his mental ability.

Byron Patterson

C.A. 13-11 M.A. 9-0 S-B I.Q. 66

Byron was a state ward. He and his two siblings had been in the same foster home since early childhood. They were an important part of a normal family situation, taking part in its responsibilities and enjoying its few luxuries.

Byron who enjoyed country life fished, hunted, and trapped in his leisure time. He and his brother did the chores on the small farm and the foster father worked in a nearby shop. He had taught both boys his trade, meat cutting.

Byron was 14 and in the eighth grade. He had not been retained anywhere along the way so with a mental age of 9 he was able to compete in no phase of eighth grade work. He worked hard in the special class, enjoyed being there, and made an average academic gain of 0.5 for the year on the CAT and gained 31 points on the Core Achievement Test scores.

He wants to enter high school next year. He fully understands that the work is beyond him, but still feels he would like to try it. Because he is so well adjusted and makes friends easily it was felt best not to discourage him.

Here is an example of the necessity of planning progressive advancement carefully enough so that an educable retarded child will not be entering the eighth grade at 13 years 11 months.

Carl Jones

C.A. 8-1 M.A. 5-10 S-B I.Q. 72

Carl was a definite challenge to the research teacher from the first day of the experiment to the last. The first day he said he was afraid. On questioning, it was discovered he was afraid, not of the research teacher, but of the upstairs.

A home visit revealed a somewhat retarded mother who did all but breathe for him, and a father only slightly less retarded, both past middle age. The small home showed little evidence of ever having been cleaned or tidied.

Carl took the bus at a corner about half a mile from his home. The side road where he lived was sparsely settled and almost no cars traveled there. Still every morning his mother walked to the bus with him and was ready again in the afternoon to take his hand for the walk back home. He was not allowed to take his milk money or lunch money himself. His father drove into town on Sunday evening and paid his teacher.

Obviously there was as much work to be done with the parents as with Carl. To complicate matters still further there was an aunt pressuring him to " study harder and learn faster."

At 8 years and 1 month Carl's mental age was 5 years and 10 months. He had a basic vocabulary of less than twenty words and very little number concept. He could do very little in combinations to 10 nor was he willing to try.

He would not play competitive word or number games unless he was winning.

He was given a readiness program in reading and numbers, with short assignments in follow-up seatwork. He was gently but firmly made to complete each one before being allowed to "do games." This he resented at first and was continually losing his paper or passing it in undone. Since another always replaced it, he soon gave up trying to evade his work, but still did it resentfully for some time.

Eventually he began to experience the satisfaction of work well done and its accompanying praise and vied with the others for papers good enough for the bulletin board.

His vocabulary grew and at the end of the year he knew over 150 of the Dolch Basic Vocabulary Cards. He had read at least six primers and a first grade book. His reading score on the California Achievement Test showed a gain of one year, and his total average gain for the year was 7 months. On the Core Achievement Test he gained 51 points.

Many opportunities were given him to do simple errands in and near the school to give him confidence in meeting people. Situations were set up to teach him unselfishness and cooperation, but he responded slowly. His life outside of school was spent entirely with adults who catered to his whims and it was felt that one year would not be long enough to change his behavior patterns.

The fact that Carl gained enough academically to go into the average group in his grade before the year was over indicated that the satisfaction of accomplishment would motivate him to continue with good study habits.

Carol Barton

C.A. 13-3 M.A. 9-4 S-B I.Q. 71

With full correction Carol's eyes are 20/60 and 20/40 and she suffers from congenital near-sightedness. She came from a large family of responsible people who were glad of any help she could get.

Carol was naturally quiet, always happy, and cheerful and popular with her classmates. She was reluctant to join the special class until assured that she would be allowed to do hard work. She was not only doing many of the interesting things the special class did, but keeping up with the eighth grade with special emphasis on arithmetic problems and language. In the former she gained 2 years 3 months on the junior high battery achievement and 1 year 1 month in the latter and made an average total gain of 1.3 years in academic growth on the CAT. She gained 25 points on the Core Achievement Test scores.

Carol plans to enter high school this fall. She was taken for a conference with the guidance director and a tour of the high school where she will go. This was felt to be extremely important since Carol is so shy and lives in a very sparsely settled rural area.

After checking her records and interviewing her the guidance director felt she had a good chance of carrying a high school program adequately for at least a couple of years.

To further facilitate Carol's work in high school, arrangements were made with the State Department of Education, Division of Instruction for Physically Handicapped, to furnish Carol with sight-saving large type books.

Charles Strickland
C.A. 14-9 M.A. 7-3 S-B I.Q. 51

The results achieved with Charles were most satisfying. With a mental age of 7 years 3 months at 14 years and 9 months, and sitting in the eighth grade, frustrations could well have been expected. Instead there was a grim determination to wring from the special class every opportunity for academic advancement. From the beginning of the day when the morning chores began, to the end of the day, every minute had educational value for him. He asked to join as many reading, phonetic, word drill or game periods as time allowed. If he had a spare moment he got another child to play a word game.

This enthusiasm carried over into the home. Every night he and his grandmother " read each other stories " and played word games. It is almost certain that he is motivated to such a degree that there will be a long period of study in the home.

His program began with readiness and carried through until his vocabulary had increased from 75 to 150 basic words. He was reading at first grade level when school closed. He had also taken home every available library book even though some were beyond his level of reading.

There was a large family and though it lacked much in material needs and in neatness, this was largely offset by the togetherness of the family group. Everyone was as happy as Charles because he was learning to read.

He showed a gain of 8 months on the CAT and 25 points on the Core Achievement Tests, but his teachers felt the actual gain was many times that.

Another factor that contributed to Charles' adjustment was his ability to adapt his limited potential to the general school life. He was a beautiful penman and gifted artistically. Much of his free time in the regular class was spent in helping with murals, charts, copying letters, etc., and there was not a room in the building that did not reflect some of his efforts in that direction. He was called on by the lower grades to help arrange bulletin boards and exhibits, designing and building stage props, etc. He had a very definite place in the school.

When asked what he would do next year he answered that he would go to the special class if there was one. If not, he would go back to the eighth grade and study hard.

No one is worried about Charles' future. He will adjust to a handicap of which he is fully aware and make the best use of his abilities.

David Mains
C.A. 8-8 M.A. 5-4 S-B I.Q. 62

David was a quiet boy, too quiet. He did as he was told (if he could do it) then he just sat again. He spoke only when spoken to and never contributed to the class. His work was neat and carefully done. On the playground, it was observed, he played well in small groups, was well liked, and accepted.

This lasted about three weeks; then David made a discovery. It was fun knowing as much as anyone in the class, sometimes more. He began taking part in group discussions and reading by himself. Soon after Christmas he began contributing to the regular class in all areas, which he had not done since sub-primary class. (He is now in the third grade.)

He went from primers to first readers with good comprehension. His basic sight vocabulary increased from about 50 words to nearly 200, and he began sounding words.

On the Upper Primary battery he gained a complete grade on the CAT. He also gained 77 points on the Core Achievement Test scores. It is hoped that with his new found self confidence he will continue to contribute to his class and in time receive the benefit of full special class help.

Evans White

C.A. 8-9 M.A. 6-2 S-B I.Q. 70

At 8 years 9 months with a mental age of 6 years 2 months, Evans should have had more than 20 words in his basic vocabulary. He had been in school for two years. He was a non-reader.

He came from a family of 10 with five younger than he. The father did not work regularly and the money earned was not spent to make the family comfortable. The dilapidated house was dirty and untidy as were the children. Whenever the research teacher called at the home for a conference, the parents were gone and generally left several small children unattended.

Along with this was a record of poor attendance for both years he had been in school. He attended the special class regularly after steps were taken to combat this truancy.

He was a quiet child, shy, thin, and pale. He seemed to enjoy the special class and worked well, but with poor work habits. His papers were done quickly and in a slipshod manner. Any work given out to be done in regular class periods was done with no regard for correctness, so this practice was discontinued and short assignments were given with a maximum amount of personal supervision. (The regular teacher had apparently given up any effort to maintain any continuity of work in view of his poor attendance, resorting to devices to keep him busy.) A minimum amount of work was given but correctness and neatness were a definite requirement. He soon developed a desire for acceptable work and his work habits improved.

Before the end of the year his vocabulary expanded to nearly a hundred words. He had begun to attack words phonetically and was reading at low second grade level. He read many first grade level books from the library and showed an overall average academic gain of 6 months on the CAT, his greatest gain being in arithmetic. On the Core Achievement Test Evans gained 52 points. He had become more alert and developed an interest in birds and flowers.

There was little carry-over of Evans' improvement in the regular class, and little improvement in cleanliness. This latter condition was to be expected in view of his home background. He was careful in the class though, always washing his hands after toilet, using tissues when needed, etc.

It is felt, however, that unless Evans can have the advantage of a special class and more individual attention to counteract the influence of the home, regression will occur at once.

Freda Charles

C.A. 13-9 M.A. 9-0 S-B I.Q. 67

Freda's experience in the special class began and ended at about the same level of achievement. She had a mental age of 9 years, 0 months, and was in the 8th grade. With a chronological age of 13 years, 9 months it was obvious that she had not been retained any year.

She had no sense of responsibility and resorted to tears when her desires were not gratified. On the second day of class she came in in tears — " didn't want to stay down here away from the others." She was not allowed to leave but told to " dry her tears and go back to work." With a surprised look she complied. After consultation with her teacher it was decided to drop her from the program.

After two weeks of being ignored by the special program she asked to be re-instated. She was allowed to come back and worked well the rest of the year.

While she attended quite regularly her attendance in regular class was erratic, the absences coinciding with tests.

Home visits and parent conferences indicated parental compliance with her irresponsible habits. The mother blamed the teachers and school system for Freda's trouble. She suggested summer tutoring which the research teacher did not encourage.

Since Freda is planning to go to high school, it was suggested to the parents that unless she was ready to shoulder the responsibilities that went with high school she could not hope to be allowed to continue. Freda gained 0.2 of a year in achievement on the CAT and gained 27 points on the Core Achievement Test scores.

Gary Poole

C.A. 13-11 M.A. 9-10 S-B I.Q. 72

Gary was a typical adolescent youth, ready to work or to get into mischief at the slightest motivation. He was creative and especially gifted at drawing.

With a chronological age of 13-11 and a mental age of 9-10, he was almost a non-reader in seventh grade, and it was felt that his academic potential had been sacrificed for his artistic ability. He was very much in demand and spent much of his regular class time drawing charts and maps.

He was put with another child of his own ability and given a thorough grounding in phonics with much sight reading, and at the end of the year achieved a total reading score of 5.9 as compared with 3.4 just a year before.

This improvement in reading was reflected in all Gary's subjects.

Another interesting thing happened to Gary. Previously on the playground he had allowed his role to be dictated by the other boys. Toward the end of the year he began to assert himself and demand, and get consideration in playground decisions.

Gary gained 0.3 of a year in achievement on the CAT and gained 37 points on the Core Achievement Test scores.

Gerald Brown

C.A. 9-4 M.A. 6-8 S-B I.Q. 71

Gerald was 9 years 3 months with a mental age of 6 years 8 months. He had been in school 3 years. His sight vocabulary consisted of ten words; he was a non-reader. His number concepts were good and he enjoyed number combinations to ten and could solve simple practical problems.

He was in the same room with his sister, whose emotional outbursts distressed him greatly. He was always on the alert and corrected her constantly. He was accepted by his peer group and enjoyed himself when on the playground away from his sister.

It was necessary to wash both of the children each morning before class and comb their hair. Though this was done as unobtrusively as facilities allowed, both children resented this at first. Later they did not resist and enjoyed having the class tell them how nice they looked. Before the end of the year they showed evidences of better habits of cleanliness, all the more remarkable because the parents made no effort to cooperate.

It was felt in Gerald's case that the greater progress had also been made in social and emotional advancement, with perhaps less chance of regression than with Gertrude. Both children showed remarkable progress on the Core tests.

Gerald gained 0.5 of a year in achievement on the CAT and gained 91 points on the Core Achievement Test scores.

Gertrude Brown

C.A. 7-9 M.A. 5-6 S-B I.Q. 71

Gertrude did not enter our program until the fourth week. Since the father and mother did not read and did not want to sign papers they did not understand some valuable time was lost.

She is the only girl in a family of five. Four boys are younger. The home was small, isolated and unbelievably filthy. There was a long history of absences because of pediculosis and lack of proper clothing.

The mother had a severe speech difficulty as did the older brother. Gertrude spoke distinctly but was loud, boisterous and very active.

At the beginning she was very shy and always seemed to be afraid she would do the wrong thing. This soon wore off, however, and she demanded almost constant attention. When she did not get this from the research teacher, she disturbed the boys of the class, wandering among them, poking, taking their pencils, etc. At the beginning this amused them and furnished the necessary audience, but this soon wore off and they began to resent her.

The year was nearly gone before she began developing a pattern of acceptable behavior, so that academic progress became her reward. By this time she had transferred her attention to the two older girls of the class and tried to emulate their ladylike behavior.

The problem of dress was a serious one. When she was given clothes the mother failed to take care of them and they were soon soiled and torn. It was late spring before she could be prevailed upon to wear dresses and even then she made sure we understood that "it might be all right to wear dresses to school, but when she had her farm and fifty Hereford cows she certainly couldn't wear dresses around a barn."

Gertrude had been in school two years. She was 7 years 9 months old and had a mental age of 5½ years. Her basic sight vocabulary was less than ten words. After an intensive readiness program she was able to do exercises in matching number and color words using wall charts and in reading a primer. She enjoyed arranging the manuscript letters on an alphabet outline and knew most of them. She had a good grasp of number concepts to ten and could do simple addition. Her attention span grew rapidly for one so emotionally unstable and before the end of the year she would work for at least a half hour on an interesting exercise.

She became very fond of the research teacher and was reluctant to attend school on the other days. She was not well accepted among her peers and seemed to lose her identity completely when she left the special class.

It was felt that great strides had been made with Gertrude, but because of the many adverse conditions in her life, both at home and at school, and her deep seated emotional conflicts, that without a continuation of special class attention she would regress and all these benefits be lost.

Gertrude gained 0.7 of a year in achievement on the CAT and gained 102 points on the Core Achievement Test scores.

Hazel Remick

C.A. 14-7 M.A. 9-4 S-B I.Q. 66

With a mental age of 9 years 4 months and a chronological age of 14½ in the eighth grade, it was felt Hazel had reached her limit of achievement. She came from a very large family, was always well dressed and well groomed. She had good study habits and worked to capacity. She was always cheerful and had many friends.

Much of Hazel's program included work in the occupational areas.

She will enter high school this fall and it is felt that what she lacks in academic ability will be compensated for in zeal and she may well complete a year or two of acceptable work.

Hazel made an overall academic gain of 0.9 of a year on the CAT with her greatest gain in the arithmetic area. She also gained 51 points on the Core Achievement Test scores.

Helen Baker

C.A. 11-7 M.A. 6-8 S-B I.Q. 58

Helen entered the special class with a nervous twitch in her eyes. She was very shy and seemed afraid to speak. Her shyness wore off after two or three weeks but the twitching continued though less intense for a few weeks longer and then disappeared altogether.

She has two younger brothers. She lives at her grandmother's much of the time. Apparently there is discord in the home with an irresponsible mother, and a father who leaves when things become unendurable. This is reflected in Helen particularly when her father is away from home.

Having the satisfaction of accomplishment in her special class work has helped her improve her work in the regular class.

While little can be done to change the home conditions that contribute to this child's frustration, it is felt that she has learned to accept her limitations and is happy in achieving well what she is able to do. A program has been planned for her, so she will not complete the eighth grade before she is fifteen.

Helen gained 0.8 of a year in achievement on the CAT and gained 35 points on the Core Achievement Test scores.

John Ricker

C.A. 13-1 M.A. 9-0 S-B I.Q. 69

John entered our class in late November. He had come in previously for the two batteries of tests. While he was not a discipline problem, he seemed completely indifferent to the procedure and left at the first opportunity. This continued after he joined the class permanently. His work was carelessly done and he spent as little time at it as possible. His teacher reported that he gave no trouble at all in school but that he did almost nothing academically. His record of attendance was very poor and there was no cooperation at home in correcting this.

Another baffling characteristic was his negativism. If asked what he did at home — "nothin." What he did summers — "nothin." Always in one word answers.

He was well accepted by his classmates and played well on the school grounds. At public functions he was likely to be noisy and run around getting into things. His parents almost never appeared at public functions.

John read fluently at third grade level though his comprehension was below that. He had a good basic vocabulary. He never chose reading or any sort of educational activity in free period.

It was decided to stress spelling and writing. His regular class text was used (6th grade) as well as a third level spelling workbook which he used with another child. The research teacher worked with him each morning, pronouncing, looking up meanings, writing sentences. He then had a trial test and worked on the misspelled words in the same way but without the teacher. Later another test was taken in the workbook and the exercises done. At the end of the day he had a well completed lesson to take to his regular teacher for comment.

At first he would leave his spelling book in his room, but since he was always sent to get it he soon began bringing it. Still he was apathetic.

The first indication of a change in John was when the regular teachers noticed an improvement in personal appearance on special class day. While previously he would wait until the bell rang before coming to class; now he always stuck his head in at the door, waited to be told how well he looked, smiled, and ran out to play.

Next he brought a jar of polliwogs to school for science class. The teachers had never known him to contribute in any class before. Still he continued to do nothing but sit in the regular class. In special class he often volunteered to play a word game with the little ones. Sometimes he took a book from the library and read during free period.

One day John stayed in at recess. When asked why, he said he had language to make up but didn't know how to do it. The research teacher helped him get started and when his regular teacher came looking for him, he was working happily. She was surprised.

Unfortunately it was too near the end of the year to complete John's rehabilitation. It is to be hoped his next year's teacher will give him the patient understanding he needs and that he has developed enough self-assurance to be able to continue to do his best and accept his limitations.

One thing is sure; John will not be satisfied with the " cabbage role " any more. On making a visit to the school to check records during the last week, the research teacher found John outside his room door (he was being punished). His teacher came out of another door wondering " what had come over him." He kept mumbling, talking out of turn, and making a general nuisance of himself until she had sent him out in desperation. No, John won't be a cabbage now, but will there be someone to go on from here? We can only hope so.

John made an average gain of 1 year, 3 months academically on the CAT, his greatest gain being 3 years 2 months in reading comprehension. His gain in spelling was only 6 months but it had unlocked the shell he had built around himself. He also gained 45 points on the Core Achievement Test scores.

Merle Wilson

C.A. 8-2 M.A. 5-0 S-B I.Q. 61

After little Merle had attended the special class about four weeks a neighbor remarked, " That little Wilson boy holds his head up higher since he started going to that special school." He had expressed a basic aim of special education, restoring the self respect of a human individual.

Merle was 8 years and 2 months and repeating the second grade. His average grade placement was 1.5 and he gained 0.6 of a year in achievement on the CAT. His I.Q. is 61. He also gained 79 points on the Core Achievement Test scores.

When Merle started in the special class his baby talk was almost unintelligible. He made noises in his nose and throat continually. His interest span was almost zero. He would enter the room in the morning, take off his hat and coat, and pass it to the teacher to be hung up. When given a work paper he went to the teacher for every letter or number. His basic vocabulary consisted of less than 10 words, and he knew about ten letters of the alphabet.

A home visit revealed dependency upon the mother in nearly everything. A new baby after over seven years may have contributed to his regression to infantile traits. After several home visits the parents cooperated in giving him more responsibility.

At the end of the third day he said, " This school is more fun than mine. I wish I could come here every day."

By Christmas he would find half of the alphabet without help and he would work through a paper in matching number words or color words, going to wall charts when needed, and he would consult the wall chart alphabet instead of the teacher.

By the end of the year he was reading primers, doing simple number combinations, and had a basic vocabulary of 60 words. He was dependable in small chores around the room, would answer the phone, and go to the next house on errands alone.

It was not possible to give Merle carry-over work for his regular school days since the regular class teacher gave him little or no supervision. Nor was he given recognition for any social or emotional gains. It is felt that unless he can have the benefit of a special class next year, or unless he can have a teacher who has some basic understanding of retarded children, he will regress rather than advance to his potential.

Peter Ryder

C.A. 13-4 M.A. 8-6 S-B I.Q. 64

The year was nearly over before any definite improvement could be reported in Peter's case. He seemed detached from all that was going on. He did a minimum of work and often tried to ignore assignments completely, particularly in arithmetic. He liked to read and would take a book the first thing in the morning and read all day, if allowed.

Peter had several older sisters, all of whom had been exceptionally good students. He was the only child at home now and the mother seemed bewildered at the turn of events and rationalized as to the reasons for his "slowness." Little was accomplished in meeting this situation since the mother worked and was seldom available for conferences.

The mother was divorced and another man was living in the home. To all appearances he did not add to the income and though Peter never commented he spent as little time in the home as possible.

He spent part of the year working at different farms and at times it was felt that he worked too hard. However, he seemed to enjoy the work and was getting regular, wholesome meals with a lot of milk, so he was allowed to rest in school whenever he appeared overtired.

The first indication of a change in attitude came early in the spring. The special class was held in an upstairs clubroom. Each week there were many chores to do, materials to be brought in from the research teacher's car, warm water for washing, the drinking fountain to fill, etc. Again at the end of the day the chores had to be done in reverse to re-convert the clubroom. At the beginning of the year it was decided not to delegate chores but that each would do his share. From the beginning, Peter never remembered to help, rushing out to meet playmates the instant school was over.

The research teacher elected to ignore this oversight, but always gave credit where it was due. All at once Peter began feeling responsible for his part of the chores and often did more than his share, and seemed to enjoy staying after school to finish projects or just to talk. The teachers agreed that the necessity of regularity of farm chores had helped to develop a sense of responsibility. Too, one could not overlook the fact that he had come to enjoy the special class day where his efforts were rewarded by success and he had developed a different attitude toward school.

His greatest academic success came in the area of arithmetic where he gained a complete grade. More important, however, was his new attitude toward life. He made no gain on the CAT, but on the Core Achievement Test gained 30 points.

Raymond Caldwell

C.A. 13-8 M.A. 9-10 S-B I.Q. 67

Raymond was 13 years and 8 months old, had a mental age of 9 years 10 months, and was sitting in a seventh grade the few days he went to school. Last year he attended 57 days for the entire year. This year he was in school 139 days.

He was not happy in school and felt completely inadequate. He was a non-reader. He did not even know the letters of the alphabet. His actual basic vocabulary in September was less than 10 words. He did not know color or number words. At the end of the year he knew about 60 words and was taking an interest in reading primers, playing word games, and reading easy books in the library.

He needs a great deal of individual help and much guidance, and unless he has the advantage of a special class next year he may well regress and leave school.

While in the regular class, Raymond did nothing at all. In the special class he worked well. He was given a readiness program which he enjoyed and grasped quickly. As soon as his vocabulary warranted he was given primers. These he enjoyed and did the follow-up work neatly and carefully, but needed a great deal of individual attention. The year was nearly over before he gained confidence enough to do his assignments with a minimum of help.

It is felt that Raymond would achieve to a third grade reading level if he could have special help.

On the CAT he gained 0.3 of a year and 40 points on the Core Achievement Tests.

Robert Caldwell

C.A. 9-7 M.A. 5-9 S-B I.Q. 60

Robert was 9 years 7 months on entering the special class. His mental age was 5 years 9 months and he was in the third grade. His family lives at a very low economic level with aid from the state. The father is over 65 and the mother much younger. There are several older brothers and younger pre-schoolers. The home was badly in need of repair, and very dirty.

It was well past the half year before Robert took an interest in personal cleanliness. He was very happy in the special class and looked forward each week to the special teacher.

He had a basic vocabulary of over a hundred words and soon added to it, as well as developing the ability to attack words on his own.

The greatest problem in working with Robert was his intense desire to be in the spotlight and his penchant for the belongings of others.

It was felt that the lack of opportunity to be with other children, and domination by older brothers contributed largely to his aggressive tactics at school. He was given many opportunities to exhibit and discuss his accomplishments, but was held to a firm disciplinary course, both of which tended to make him less aggressive.

He took nothing in the special class but had to be watched in his regular class. After several conferences with his teacher it was decided to enlist the help of his classmates, explaining that because he had so very few possessions of his very own, he had not learned the concept of right and wrong where possessions were concerned. Discussions and sociograms were used through the year, and children shared with him. Long before the end of the year he had learned to respect other's possessions.

Many lessons in personal cleanliness and good health habits were needed. While progress was made, it was far from satisfactory, though by spring it was evident that he was making an effort to clean himself and take care of his clothes.

Robert read at second grade level which was in keeping with his mental age. He advanced 2 months on the CAT in reading. His greatest academic gains were made in arithmetic, a gain of one year. His total gain was 0.6. On the Core Achievement Tests he gained 39 points.

More important than these were his gains in health habits and in the social areas. The answer to Robert's problem is a special class where a teacher would have an opportunity to continue building on the gains already made.

Sally Green

C.A. 11-2 M.A. 6-6 S-B I.Q. 58

Sally is a state ward, lives with a widow and six other foster children, one of which is a sister. She was 11 years 4 months at the beginning of the experiment, and in the fifth grade. Her grade placement on California Achievement Test was 2.4; her mental age placement was 3.1. At the end of the period her grade placement gain was 1.1. Her I.Q. as established on the Stanford-Binet is 58.

She had made a gain of 1.1 years on the CAT after meeting the research teacher 31 days and gained 26 points on the Core Achievement Test scores. Still at no time during the experiment did the research teacher or the regular teacher feel that headway was being made.

She was immature and emotionally unstable, lashing out at another child in a moment of pique, and the next moment apologizing and penitent. One day her work would be done carelessly and sloppily with no thought of correctness; the next day her work would be done neatly, well written, and correct.

Her regular teacher was cooperative, prepared special work for her and gave her individual time every day. She also provided interesting craft work at her level of ability. At any sign of social non-acceptance special activities were planned to give Sally a sense of belonging. The teacher felt she had regressed in behavior and academic achievement.

With the research teacher Sally resorted to ruses to get attention. She was noisy; she would take the most coveted toys and hide them. She would take the best ball, not let her classmates play with her but wait until special friends came. She had little sense of fair play. Still on occasions she would be quiet, orderly and generous. However, these days were as infrequent at the end of the period as at the beginning.

Many consultations were held with the regular teacher, school principal, superintendent, welfare case worker, and foster parents in an effort to project into the future and plan a course of action which would give her maximum protection in the event she did not show more emotional stability at physical maturity. It was felt that she would be in moral danger and a potential prey to job exploitation. Her welfare case worker is now exploring possible institutional care where she would be self-supporting and still receive the necessary amount of protection and supervision.

Susan Green

C.A. 12-4 M.A. 6-1 S-B I.Q. 50

Sally's sister Susan proved an interesting contrast. Susan was 12 years 6 months in the fall, and in the sixth grade. Her grade placement was 2.7 with a mental age placement of 2.3. Her I.Q. was 50, barely enough to qualify for the class.

Susan was a well adjusted youngster. Though noisy at the beginning of the year she soon fell into quiet behavior habits. She was happy in the special class doing all work assigned, neatly and correctly. Her free activity periods were spent in reading or other worthwhile activities.

In the regular class she worked to capacity all the time, doing as much of the class work as she could and with no apparent feeling of frustration. She was well accepted by classmates of both sexes and took part in extra-curricular activities. Susan made a gain of 0.7 of a year in achievement on the CAT and 18 points gain on the Core Achievement Test scores.

Near the close of school in one of the social discussions, of which there were many, she told her research teacher that she usually did the dishes alone after supper. When asked why she did them alone she answered "to keep the other children from fighting over them", because this tired her mother. In a conference with the foster mother she told the same story, and said Susan had matured a lot during the year.

Samuel Harper
C.A. 11-2 M.A. 6-2 S-B I.Q. 55

The third member of this foster home was 11 years 2 months in the fall and was in the fourth grade. His average battery grade placement was 3.2, his mental age placement was 1.6, and his average gain was .2 for the year. His I.Q. was 58. He was a complete non-reader and did not advance beyond primers during the year.

He was the last one to enter the foster family group after stormy years in many foster homes. When a small boy he lost the sight of one eye in a playing accident. He was poorly adjusted both in the home and school situation. The regular and research teachers cooperated in exploring interest possibilities and he soon developed an interest in nature in all its phases but especially in birds. He was given many opportunities in school to develop this hobby. The foster mother did the same and during the year a kindly neighbor lady took an interest in him. He carried wood and did errands for her and when spring came he helped her in her flower gardens. She paid him regularly for these chores. Best of all she had many bird houses and feeding stations. They enjoyed the birds together.

His emotional and social adjustment was rapid and went beyond that to be expected for his mental age. His foster mother was happy at the change, as was the welfare case worker. Many things contributed to Sammy's adjustment but the greatest factor was his feeling of security in knowing so many people loved and understood him.

When Sammy began earning money he often brought things to share with the children. At Christmas time he gave the research teacher his own Bible. He was afraid she "didn't have one of her own."

It was felt that unless Sammy had to be moved from his foster home his development would continue. It was also felt that when he was older a job on a farm would not only give him personal satisfaction but also make him a useful member of society. Sammy gained 0.2 of a year in achievement on the CAT and gained 45 points on the Core Achievement Test scores.

Stanley Ellis
C.A. 11-9 M.A. 7-4 S-B I.Q. 62

Stanley showed the greatest academic gain of any in the experimental group. His average gain was 2 years and 3 months, with the greatest gain in the arithmetic area, 3 years 2 months. On the Core Achievement Tests he gained 30 points. His social and emotional growth, too, was outstanding.

Stanley was 11 years 9 months in September with a mental age of 7 years 4 months. He was in the 6th grade. His average grade placement went from grade 2.7 to 5.0.

He was small for his age, was shy and had a speech difficulty. He came to school very early on special class day and spent the time helping the research teacher unpack and organize the materials. This gave an opportunity to help in speech. It was not long before an improvement was noticed. This gave him confidence and his regular teacher soon reported that he was now contributing voluntarily to class discussions.

At Thanksgiving the special class was invited to a program in Stanley's room. He took part in the program. His speech difficulty was hardly noticeable, and he was poised and self-confident.

He was a good worker and enjoyed all his subjects. He was particularly interested in working simple science experiments and was allowed to use the school facilities. He brought many of the materials from home after making lists and writing out the directions from elementary science books.

He wants to work in a store when he is old enough to leave school. He was given extra work from the Rochester Occupational Series on "Super-market." These exercises he did at home bringing his work each week for correction. He did his work very well and was a beautiful penman.

It was felt that helping Stanley overcome his speech handicap was the key factor in his amazing progress. With the new confidence he has gained, he will make maximum use of his ability. While he realizes that he does not learn as fast as his peers, he knows that there are many contributions he can make, and even without a special class it is believed that he will continue to work at the peak of his ability. Plans have been made to space his social promotions and retentions to allow a minimum of frustration.

Vera Philips
C.A. 15-5 M.A. 10-8 S-B I.Q. 73

At 15 years 5 months and with a mental age of 10 years 8 months, Vera was an eighth grader. She was the only girl and had an older and two younger brothers. The parents were hard working people of apparently average intelligence and modest means. They realized and accepted her handicap and appreciated the efforts being made to give her special help.

At school she was well liked by both boys and girls, and had good rapport with all the teachers. She had good work habits, and though she could not keep up in all subjects she worked to capacity all the time. She had not developed any emotional problems so often found among teen age girls in similar situations.

Vera read at upper fifth grade level, with good comprehension. She could spell and use in sentences most words in the list of "The 1000 Most Commonly Used Words." She read a great deal and enjoyed writing stories to bring to the special class each week. She readily admitted her inability in arithmetic. A great deal of work was done in this area with practice in the fundamentals, simple fractions and decimals, and many problems with everyday applications.

Her greatest gain on the CAT was made in the arithmetic area, 2.1 years, and her average gain was 1.1 years. She gained 50 points on the Core Achievement Tests.

It was felt from the beginning that little gain would be realized in Vera's case and the regular teacher would see little change in Vera's work, but the reverse was true. Before the middle of the year the teacher reported that her work was neater and more carefully done, and that she contributed more in class discussions in all subjects.

Vera plans to enter high school in the fall. It is felt that that experience will add to her growth and that she may well complete at least two years with a minimum of frustration.

William Eames
C.A. 13-9 M.A. 8-9 S-B I.Q. 72

The research teacher played a minor role in the change that took place in William Eames. Many people were concerned: his regular teacher, the family next door, his foster mother, his welfare case worker, a previous teacher, the bus driver who was also the local sheriff, and more than anything his desire to change an outlook on life which was heading dangerously in the wrong direction.

It was soon apparent that the boy next door was going to be a priceless friend of the special class. Being the custodian of our "business office turned school room one day a week", a member of a teaching family, and very much interested in the experiment, his contributions were many and varied. He was able to give an honest evaluation of Bill's role in his foster family and in the community.

Bill was a state ward in a home with two other state ward boys and two children, a boy and a girl about 10 and 11 from a broken home. Their parents were related to the foster mother. The economy of the seven family members was based almost entirely upon the income from the three state wards.

All the home chores were done by these boys. Bill's job was washing dishes, which he disliked, and helping with the cooking, which he enjoyed. The kin children had no responsibilities at all.

The first day in the special class Bill was quiet and spoke only when spoken to. He was well dressed but had a strong body odor. His eyes had a sullen look.

In early morning sessions we discussed many things but stressed the importance of cleanliness and proper diet. Bill's reaction was immediate. He became very fastidious.

In discussing family responsibility he discovered that many college boys help their mothers with the dishes. Later in the year he said he didn't complain about doing dishes any more. He knew it made his mother feel badly and it was a good way to get used to doing the unpleasant things that went with every job.

His regular teacher reported that Bill almost never worked to capacity, had moody spells, and was aggressive toward the younger boys. At the end of the year the regular teacher felt he had gained at least three years academically and was a good school citizen. Achievement tests given at the beginning and end of the experiment showed a gain of 1.1 grades. He had gained enough self-importance to want to do his best work.

At the beginning his attitude and behavior toward the bus driver was bad. He was reported both at home and at school for this. He got into trouble in the neighborhood and was threatened with the sheriff, who was also the bus driver. Near the end of the year the driver bought a new car. When the research teacher admired it and suggested the children must be careful of it, the bus driver-sheriff answered, "Don't you worry about that, Bill looks after that. He won't let the children put their hands on the seats for fear they'll leave a stain." There was real friendliness in his voice.

At the beginning of the year Bill got into serious trouble with the wrong company. He tried to run away several times. He took things and sold them. The foster mother determined to give him up. In home conferences her attitude was completely negative in any discussion. She would not believe Bill's behavior was an indication of emotional problems, but felt it was "bad blood cropping out." She felt that no matter how many friends he had to choose from, he would always choose the wrong ones.

At Christmas time the children all made woven pot holders for their mothers. After the vacation he said he had bought a weaving frame, made some holders and sold them to the neighbors. Since he needed capital it was suggested he make them on commission. With a minimum of guidance he adjusted the selling price to allow himself a reasonable profit. He was able to realize a small income. Since Bill sold the pot holders himself from door to door, he gained self-assurance and the neighbors began to know and understand him.

Each one in the class was allowed to invite a guest for the final picnic. Bill invited a girl from his regular class. On checking with his regular teacher it was learned that she was not only at the top of her class but of good moral character. She was pretty, too.

At the beginning of the year no one had anything good to say for Bill. Some felt he was a victim of circumstances; some felt he was "just plain no good." The transformation came slowly and regularly as he learned to adjust to his surroundings and to realize his potential worth to society. His foster mother's attitude changed completely. She was proud of his accomplishments and praised him to everyone.

It is felt Bill's new status in the community will give him the needed incentive to continue growing and that he will not regress.

Bill gained 1.1 years in achievement on the CAT and also gained 52 points on the Core Achievement Test scores.

In all cases our main concern is, "What will happen next?" Will these children regress until parents and citizens become alarmed enough to insist on a special class? Or will the advances made serve as an incentive to obtain special classes before regression can occur? It is strongly felt that in some instances gains were substantial enough to have lasting results. In any event one cannot plead too strongly for an equal educational opportunity for mentally retarded children everywhere.

PART IV

SUMMARY AND RECOMMENDATIONS

Summary

1. Pupils in grades one through eight in twenty communities having a school population of 100 to 300 pupils were given the California Test of Mental Maturity in May and the first week of June, 1958. 2,632 pupils were tested.

2. 237 or 9.0% of those tested with the CTMM apparently were in the educable mentally retarded group. (50-75 I.Q. inclusive)

3. This group was retested individually with the Stanford-Binet, Form L. As a result 89 or 3.4% were in group 50-75 I.Q. inclusive.

4. Of this number the chances appear to be 1 in 3 that a pupil who has an I.Q. of 50-75 on the CTMM will have an I.Q. in that range on the Stanford-Binet. Gains were made by 160 pupils on the Stanford-Binet over the CTMM and losses were made by 69.

5. Of those eligible for the program at the beginning of the program and at the end of the school year two out of three were boys.

6. Five communities in each of two sections of the State of Maine were given the services of a research teacher one day a week. These teachers held conferences with the regular teachers and left materials with them for the other four days of the week to be used with the pupils in the special class.

7. The other five communities in these two sections of Maine had no special work but served as a control group.

8. The average I.Q. of those qualifying for the program was 64 (median 66) and it was hoped that an academic gain of 6 to 7 months might be made on the test-retest use of the California Achievement Test.

9. California Achievement Tests showed an average improvement of 0.3 of a year for pupils in the control groups and 0.6 of a year for those in the experimental groups.

10. Not all pupils showed academic gain on the CAT. In the three instances of those who did not make an academic gain in the experimental groups, the pupils were in grades 6, 7, and 8 and had probably reached their potential. In the control groups, losses in academic results were found in four cases, two of which were in grade 5 and the other two in grades 7 and 8.

11. On the language and reading sections of the CAT the experimental groups made average gains of 0.5 of a year and the control groups gained 0.4 of a year.

12. On the arithmetic section of the CAT the experimental groups made an average gain of 0.7 of a year while the control groups gained 0.3 of a year. There was more than twice as much gain by the experimental groups as by the control groups. This same relationship held in the case of the mathematical concepts on the Core Achievement Tests.[1] It would appear that teaching arithmetic objectively by handling concrete materials might have been a factor in this improvement.

13. Core Achievement Test results have to be viewed individually inasmuch as the same tests were not administered to all. The tests were based on mental level and chronological age. In the experimental group gains up to 102 points (number right) were made whereas in the control group gains only went as high as 34. Of those who made no gains on the Core Achievement Test in the experimental groups one individual lost four points and in the control group one lost as many as 33 points.

14. The Adjustment Rating Scale[2] showed far greater gains in all areas, with the exception of Over-All Classroom Work, as gauged by both the research teachers and the regular teachers in the experimental areas. The regular teachers seemed to view the Adjustment Rating Scale primarily from the viewpoint of academic success as evidenced by pupils in a classroom of children with normal capacities.

15. Apprehension on the part of some school personnel and parents slowed down the program to some extent. This was not a prevailing condition in most communities.

16. Good public relations were found to be essential to the smooth functioning of the project. Where parents had not fully grasped the import of the program, there was misunderstanding of the value of the research project. Much greater support and cooperation came from those families which had a more thorough understanding.

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[1] Appendix I

[2] Appendix J

17. Interest was aroused among a wider circle of lay persons than those families immediately affected by the program. This included civic organizations which first were interested from the viewpoint of getting a speaker, to a later viewpoint of doing something about it in the community.
18. The Maine State Board of Education has endorsed a plan of paying 70% of a special teacher's salary in rural communities with less than 300 pupils. This will permit several towns to work together and have the services of a special teacher.

Recommendations

1. Rural communities need to become aware of the fact that there are children in the schools who are in need of a special class.
2. Rural communities need to be versed in the services offered by the State Department of Education to towns with a school population under 300.
3. Rural communities should be alerted to the physical needs of the mentally retarded in relation to the room area which is acceptable for a special program.
4. In setting up a program in rural communities there are several possibilities. Listed in a descending order of choice they seem to be as follows: —
    - a. A full time program in one of several towns in a school union. (A school union is made up of all towns under the same superintendent.) Students may be transported from several communities to the community maintaining a special class.
    - b. Two classes in two sections of the school union with one-half time in each.
    - c. In communities where a sub-primary group meets only in the morning, the afternoon could be devoted to the program for the mentally retarded without adding teaching personnel or room space.
    - d. The final possibility would be the one day a week program as was used in this experiment. The reason this has been rated at the lower end of the list is that continuity is difficult to maintain when a teacher sees the pupil only once a week.
5. Research and a continuance of a program for the mentally retarded who have been socially graded and arrived at high school level need to be developed on a level of comprehension suitable to this group with emphasis on the practical promotion of skills so that these pupils can be self-supporting.
6. The location of jobs and job opportunities available at the level of competence of this group of future citizens needs to be studied. In some cases this may mean locating some of the pupils in other sections of the state to get the needed training.
7. A program for the mentally retarded will be whole-heartedly received and supported by the community only if it is thoroughly understood by the school personnel and community.
8. The continuance of this particular program for at least another year would have made more vivid the improvements in this group of children and given a more adequate check of the amount of retention over a longer period.
9. A similar program in another section of Maine would help to verify some of the findings of this project and would help that area to incorporate in the program some of the ideas gleaned by the research teachers in the current program and avoid some of the pitfalls which may have slowed it down.
10. Similar programs in other sections of the country would confirm some of these findings or establish other findings. Larger numbers involved in a project might lend support for the use of such a program.
11. Rural communities in Maine should hire special teachers and thus avail themselves of the plan endorsed by the Maine State Board of Education wherein 70% of the salary would be subsidized by State funds.

APPENDIX A

Application to the Commissioner of Education, U. S. Department of Health, Education, and Welfare, for funds to support research under the provisions of Public Law 531, 83d Congress, submitted by:

State of Maine Department of Education on March 24, 1958.

1. **Title.** DEVELOPMENT OF A PROGRAM FOR EDUCABLE MENTALLY RETARDED CHILDREN IN RURAL SCHOOLS.

2. **Problem.** States and communities throughout the nation are faced with the problem of how to best meet the educational needs of retarded children living in rural areas and attending rural elementary schools. This is a national problem peculiar to all sparsely populated sections and is typified by rural communities in the state of Maine. As yet the actual number of mentally retarded children residing in rural areas is not known and in Maine it has not been determined if this school population is large enough to make it possible to organize special public school classes for mentally retarded children. The only criteria that we have for judging large numbers of children in rural areas are the results of group intelligence tests which were administered by teachers having little or no training in the area of measuring intelligence, and observations of superintendents, school principals, and teachers. A small rural community is not in a financial position to employ well trained and qualified professional personnel to conduct an adequate testing program. In these areas the education of educable mentally retarded children remains practically unsolved. The Maine State Department of Education hopes through this study to develop a practical program for improving the educational achievement of these children in all states.

3. **Other related research.** The research available in this area is very limited. At the moment there are several other Cooperative Research Projects investigating this particular problem. The State of Kansas, Research Project 055, is experimenting with an itinerant consultant trained in the area of mental retardation to consult with parents, school officials, and teachers in planning an individualized program for each child in the control group. The State of Wyoming, Research Project 313, is conducting a study on the identification of mentally retarded children to discover the degree to which these children are misplaced in schools and institutions. Wyoming hopes to use its study as a basis for planning a program in sparsely settled regions.

In order to improve the effectiveness of the current study in Maine, it is deemed advisable to benefit by the experience of the investigators in these two projects. Therefore, plans are being made whereby the Director will visit both the Kansas and the Wyoming projects so as to confer with them prior to the initiation of the field work in the fall.

4. **Questions and/or hypotheses.** This experiment is to test the feasibility of using persons trained in identifying and teaching educable mentally retarded children to supplement the work of the regular classroom teacher in areas where the school population is between 100 and 300 children. Specific questions which may be answered by this project are:

   a. What is the effect of this program on academic achievement of educable mentally retarded children?
   b. How does this program affect the social maturity of educable mentally retarded children?
   c. Is the testing program used practical in communities of this size?
   d. Is the program financially feasible in small rural areas?
   e. What is the effect of the program on in-service training of the regular classroom teachers?

5. **Procedure.**

a. **Experimental design and/or general method.** The study will be divided into four phases: (1) April 1, 1958 — May 31, 1958 — Identification of school communities to be used in the study, this to be accomplished by the research staff which will select, from the 186 communities in Maine with a school population between 100 and 300, twenty that will meet the criteria for the study; (2) June 1, 1958 — August 31, 1958 — Careful testing of the children between 7 and 14 in the twenty communities selected, these tests to be made by a mobile staff consisting of a pediatrician, psychologist, social worker, and experimental research teachers. (3) September 1, 1958 — June 30, 1959 — in each of ten of the selected communities an experimental research teacher will conduct a special class for educable mentally retarded children (I.Q. 50-75 by Stanford-Binet) between the chronological ages of 7 and 14 years one day (or two half-days) each week. The other four days the children will be in the regular classroom. The regular classroom teacher and the experimental research teacher will correlate the work of the selected children as far as practical. The experimental research teachers will meet one day per week for consultation and to develop materials to be used by the classroom instructors. In the other ten communities the educable mentally retarded children will remain in the regular classroom without special help other than that usually provided by the classroom teacher; (4) May 1, 1959 — August 31, 1959 — At the close of the school year, the mobile testing unit will again test the children in the control group in the twenty communities for achievement and social maturity. The results of these tests and the children's school achievement records will be analyzed and achievement of children having supplementary instruction compared with those having only the regular classroom program.

b. **Sample.** The study is to be based on the educable mentally retarded children found in twenty selected communities, each community having a total school population between 100 and 300, the communities to be carefully selected by the research staff so they may be in school systems with teachers of comparable training, teaching in schools with similar materials and equipment. The data needed to make the selection of the twenty communities from the 186 in Maine may be obtained through a questionnaire to the superintendent of schools, data available in the State Tax Assessor's Office, and in the State Department of Education.

All of the children in the twenty selected communities would be given the California Test of Mental Maturity by a qualified member of the mobile staff before the close of the 1957-58 school year. The results of these tests would be evaluated for the purpose of selecting those children who could possibly be classified as mentally retarded. A qualified member of the mobile staff would then administer the Stanford-Binet Form L revised edition to test individually each child who had been previously diagnosed by the California Test of Mental Maturity as being mentally retarded, these individual tests to be given during the summer of 1958. The results of these tests would be evaluated for the purpose of selecting those children who would participate in the experiment. Every effort will be made to obtain an appropriate distribution as to grade level. A pediatrician would then examine each mentally retarded child for the purpose of detecting any physical defects and recommend treatment for any defects that might seriously impair the child's intellectual capacity. The pediatrician would also prepare a detailed report of the diagnosis of each child examined. The psychologist would work with each of these children for the purpose of diagnosing any emotional disturbances or block and prepare a detailed report on any that were found to be seriously disturbed. The psychologist would also make recommendations that would benefit the experimental research teachers working with these children. The social worker would visit the homes of each of the mentally retarded children to determine the home condition and report the details to the experimental research teachers.

c. **Control.** How the control group is to be selected has been described in " b " and it would consist of the educable mentally retarded children in twenty communities having a school population between 100 and 300. This procedure should result in the selection of approximately 100 children. Not less than forty of these children will receive specialized supplementary instruction and not less than forty will participate only in their regular classroom program.

d. **Data.** Selected achievement tests would be given to each of the 80 or more children in the controlled and experimental groups at the beginning of the 1958-59 school year and all school achievement records carefully analyzed. This procedure would be repeated at the close of the school year. Tests of social maturity would also be given at the beginning of the school year and at the completion of the classroom work.

e. **Statistical analyses.** Statistical analyses would be accomplished during the summer of 1959 by the project investigator, the experimental research teachers, Dr. John Crawford of the University of Maine, and Dr. Frank Lathrop of the Maine State Department of Education.

f. **Expected duration of the project.** The project would be expected to start April 1, 1958, and continue for a period of eighteen months.

g. **Expected end product.** A final report of the research investigation will be prepared for presentation to the U. S. Office of Education. In addition articles may be prepared for various professional journals and for distribution to school personnel in the state of Maine. If the project shows promise of proving worthwhile, it is anticipated that the State Department would present another proposal for support of continued research under the Cooperative Research Program.

6. **Research staff.**

The Director—Philip A. Annas, currently serving as Executive Director of the Division of Instruction, Maine State Department of Education, will devote part time to the project. Mr. Annas formerly served as superintendent of schools and has under his supervision in the Division of Instruction the programs of both education of physically handicapped and mentally retarded children.

Assistant Director. Miss Manon B. Smith, currently serving as Director of Education for Mentally Retarded Children, Maine State Department of Education, will also devote part time to the project. Miss Smith received her B.S. degree in Education from Gorham State Teachers College, Gorham, Maine, and is this year completing the requirements for the Master of Education degree at Boston University, majoring in Special Education. She established a special education program for mentally retarded children in the Westbrook, Maine, public schools while employed there, and has also had experience as a regular classroom teacher.

Project Investigator. This individual is to be selected from several available candidates on the basis of the following requirements: (1) Education — earned Doctor's degree or the approximate equivalent, including graduate courses in statistics and research, psychology, and preferably courses in mental retardation; (2) Experience — experience in organizing and directing experimental research projects in education.

Experimental Research Teachers. Experimental research teachers with a background of experience in elementary education and training in the education of mentally retarded children.

Secretarial assistance. Secretarial service so as to provide ample support for the research personnel. Secretarial assistance will be required on approximately a full-time basis.

Consultants. Dr. Romaine Mackie and Dr. Harold Williams of the U. S. Office of Education. Dr. John Crawford, Professor of Education and Director of Bureau of Educational Research and Service, University of Maine, Orono, is available for consultant service; also Dr. Frank W. Lathrop, principal investigator for a research project currently being conducted by the Division of Vocational Education in the Maine State Department of Education. Dr. Lathrop received his B.A. from Yale University, Master in the Science of Agriculture from Cornell University, Doctor of Philosophy from Cornell University. He has been a member of the Research Committee of the American Vocational Association and directed the appraisal of Food Production War Training Program (study made by the U. S. Office of Education). Also, possibly other individuals who are well-known in this field and who could contribute to it.

APPENDIX B

Letter to Superintendents

State of Maine
DEPARTMENT OF EDUCATION
Augusta

April 9, 1958

Dear Superintendent:

Probably by now you are aware of the fact that the Maine State Department of Education has been extremely fortunate in having a proposed research project accepted by the U. S. Department of Health, Education and Welfare titled "Development Of A Program For Educable Mentally Retarded Children In Rural Schools". Enclosed you will find a copy of the research project.

We regret that not all of Maine's 186 rural communities with school populations between 100 and 300 pupils will be able to benefit from this research as we are only going to be able to work with the children in 20 of the communities. These 20 communities will be selected on the basis of matching according to the number of children, size of schools, size of community and the educational background of the teacher(s).

The town(s) in your school union that have a school population of between 100 and 300 pupils are eligible to be considered for participation in this research project. This would mean that all of the children in the selected town(s) would receive a thorough testing program and in addition, the children found to be educable mentally retarded in 10 of the selected 20 communities, will be benefited by receiving special educational programs taught by thoroughly trained special education teachers. Sufficient funds have been provided by the U. S. Office and State of Maine to pay for the testing and salary of the special education teachers.

Would you be willing to contact your school committees as soon as possible for the purpose of deciding whether or not your eligible town(s) wish to be considered for participation in this research project?

Please fill out the enclosed blue form and return it to me on or before Monday, April 21, 1958 as it is necessary for us to know all of those towns that wish to participate in order that we can match and select the 20 communities this month, as we will begin the overall testing program this spring.

Sincerely yours,

(Miss) Manon B. Smith, Director
Education for
Mentally Retarded Children

MBS: cal
Enc:

ON OR BEFORE **MONDAY, APRIL 21, 1958** — PLEASE RETURN THIS FORM TO:

(Miss) Manon B. Smith
Director of Education
For Mentally Retarded Children
Department of Education
Augusta, Maine

"A"

List towns, with school populations between 100 and 300, wishing to participate in the research "Development Of A Program For Educable Mentally Retarded Children".

1. ....
2. ....
3. ....
4. ....
5. ....

"B"

Check the towns which could provide a room to be used for instruction one day each week.

1. ....
2. ....
3. ....
4. ....
5. ....

SIGNED:

....
Superintendent of Schools

DATE:

....

MBS: cal

APPENDIX C

Consent Slip

State of Maine
DEPARTMENT OF EDUCATION
Augusta, Maine

Date .... 19 ....

For ....
Pupil

Address ....

As the parents (or guardians) of the above named pupil, we would like him (her) considered for enrollment in a special program suited to his (her) age and capabilities. It is understood that such enrollment is contingent upon meeting the requirements for admission to such a class.

....

....
Signatures of parents (guardians)

APPENDIX D

Letter to Publishers

August 25, 1958

Name
Address

Dear Sir:

The Maine State Department of Education is conducting a federal research project titled " Development of a Program for Educable Mentally Retarded Children in Rural Areas ".

Your company may be interested in having our two research teachers use some of your materials in their experimental research teaching.

As the U. S. Office of Education will be publicizing this project on a national basis, your materials may receive recognition on that level. All the teachers in 20 Maine communities will be introduced to and become familiar with all materials that we will use.

We plan to take pictures of these children in true learning situations throughout the year.

Would your company be interested in providing complimentary materials to our two experimental research teachers to be used for this federal research project?

Our teachers would be interested in receiving the following materials: —

Sincerely,

(Mrs.) Ruth L. Pennell
Project Investigator

RLP/d

APPENDIX E

List of Cooperating Publishers

Beckley-Cardy
1900 N. Narragansett Avenue
Chicago 39, Illinois

Benefic Press
1900 N. Narragansett Avenue
Chicago 39, Illinois

Children's Press
Jackson Blvd. & Racine Avenue
Chicago 7, Illinois

Continental Press
Elizabethtown, Pennsylvania

Garrard Press, Publishers
Champaign, Illinois

Ginn and Company
Boston, Massachusetts

Gledhill Bros. Inc.
20 Chestnut Avenue
Jamaica Plain
Boston 30, Massachusetts

E. M. Hale & Company
Eau Claire, Wisconsin

D. C. Heath & Company
475 South Dean Street
Englewood, New Jersey

Laidlaw Brothers
Thatcher & Madison
River Forest, Illinois

J. B. Lippincott Company
521 Fifth Avenue
New York 17, New York

Lyons and Carnahan
2500 Prairie Avenue
Chicago 6, Illinois

McCormick and Mathers
1423 W. Goodale Blvd.
Columbus 8, Ohio

Charles E. Merrill Books
Education Center
Columbus 16, Ohio

Milton Bradley Company
43 Cross Street
Springfield, Massachusetts

Noble & Noble
67 Irving Place
New York, New York

F. A. Owen Company
Dansville, New York

Row, Peterson Company
104 S. Lexington Avenue
White Plains, New York

Scott, Foresman & Company
120 East 23rd Street
New York 10, New York

Silver Burdett Company
45 East 17th Street
New York 3, New York

Webster Publishing Company
1800 Washington Avenue
St. Louis 3, Missouri

Wheeler Publishing Company
2831-35 S. Parkway
Chicago 16, Illinois

Wilcox & Follett Company
1010 West Washington Blvd.
Chicago, Illinois

World Book Company
313 Park Avenue
Yonkers 5, New York

Free Materials from

Beckley-Cardy
1. Cowboy Sam and the Indians
2. Buttons at the Farm
3. Pets and the Pet Parade
4. Bucky Buttons

Benefic Press
1. I Can Read
2. Hear Me Read
3. Reading's Easy
4. Readiness for Power in Reading
5. Manual for Functional Phonetics

Children's Press
1. I Want to Be a Bus Driver
2. I Want to Be a Baker
3. I Want to Be a Storekeeper
4. I Want to Be a Fisherman
5. I Want to Be a Telephone Operator
6. I Want to Be a Dairy Farmer
7. The True Book of Air Around Us
8. The True Book of Moon, Sun, and Stars
9. The True Book of Pioneers
10. The True Book of Transportation
11. The True Book of Seasons
12. The True Book of Holidays
13. The True Book of Plants We Know
14. The True Book of Pebbles and Shells
15. You and Science of Plants, Animals, and Earth
16. You and the Constitution

Continental Press

1. Phonics
2. Wordland
3. Reading
4. Arithmetic
5. English
6. Science
7. Geography
8. History
9. Maps
10. Health and Safety
11. Art

Garrard Press, Publishers

1. Who Gets It?
2. Consonant Lotto
3. Vowel Lotto
4. The Syllable Game
5. Folklore Stories
6. Dog, Bear and Circus Stories
7. Teacher Help Booklets
8. Picture Word Cards
9. Sight Phrase Cards
10. What the Letters Say
11. Take 2,000 Commonest Words

Ginn and Company

1. Russell Check List for Reading Readiness

Gledhill Bros. Inc.

1. Gel-Sten Workbooks — Spirit
2. Reading Readiness
3. I Can Do It — Part 1
4. Pre-Primer — Part 2
5. Read and Do
6. Phonics — Sounds in Words — Book 2
7. Phonics — Sounds in Words — Book 5
8. Phonics — Sounds in Words — Book 8
9. Happy Health Days
10. Familiar Birds

E. M. Hale & Company

1. Edward, Hoppy and Joe
2. The Quiet Mother and the Noisy Little Boy
3. All about Famous Scientific Expeditions

D. C. Heath & Company

1. See and Do
2. Ned and Nancy
3. Bigger and Bigger
4. Little Lost Dog
5. Do and Learn for above
6. Molly, Pete and Ginger
7. Do and Learn for above
8. A Home for Sandy
9. Do and Learn for above
10. Lost and Found
11. Do and Learn for above
12. Secrets and Surprises
13. Do and Learn for above
14. Do and Dare
15. Do and Learn for above

Laidlaw Brothers

1. Children Everywhere
2. The World Around Us
3. From Every Land
4. Stories We Like

J. B. Lippincott Company

Science Work Books (1, 2, and 3)

Lyons and Carnahan

1. Arithmetic for You (3) (Text)
2. Numbers Practice for You (3) Work Book
3. Happy Times

Lyons and Carnahan (Continued)

4. Down Our Way
5. Improving My Speech (3)
6. Meeting New Friends (reader)
7. Once Upon a Storytime
8. Stories from Everywhere (3^1)

McCormick and Mathers

1. Puzzle Pages (2, 3, 4)
2. Living Today (3 and 4) Science and Health Series
3. Kindergarten Fun
4. Growing Up with Numbers (3)
5. We Spell and Write (3)
6. It Is Fun to Write

Charles E. Merrill Books

Spelling for Word Mastery

Milton Bradley Company

1. 2 boxes of beads and laces 100 assorted shapes and 6 laces
2. 2 bags of loops for loom
3. 2 primary peg boards
4. 2 sewing card sets
5. 2 large peg boards (#474X)
6. 2 counting frames, 10, tens, (#9316)
7. 2 beaded pegs to be used with board (1/8")
8. 2 1000 large colored pegs, 2" long, #474X, to be used with large primary peg board
9. 2 wooden beads for stringing, (#473, assorted sizes and colors)
10. 2 parquetry design blocks, (#8439-B)
11. 2 plate cleaner art
12. 2 link letters, (#9503)
13. 2 loop weaving looms, (525)
14. 2 cubicle counting blocks, (100 #8039)
15. 2 tell time quiz-mo's (#9375)
16. 2 Fractions Are Fun, (#9504)

Noble & Noble

1. Our City Spelling Book
2. Our America
3. Stories from Famous American Men and Women
4. Penmanship Material
5. Living in our Neighborhood
6. Reading Fun
7. How We Live
8. Improving Your Reading
9. Choral Speaking is Fun
10. Adventures in Reading Readiness

F. A. Owen Company

1. The Instructor Teaching Aids, 1958
2. Arithmetic Skill & Concept Charts
3. Pamphlet explaining Resource Units
4. Pamphlet on Arithmetic Skill Cards
5. Pamphlet on The Instructor Art Appreciation Series
6. Pamphlet on The Instructor Art Packets
7. Pamphlet on series of Physical & Political Work Maps
8. Pamphlet on Certificates and Awards
9. Pamphlet — The Instructor Teaching Aids
10. Pamphlet Free Offer with the Subscription for the Instructor
11. Picture Alphabet Wall Charts, Cursive Writing
12. 2 Instructor Magazines

Row, Peterson Company

1. Skip Along (Pre-Prim., 1)
2. The Reading Road to Spelling (2)
3. Daily Drills in Language Skills (3)
4. Neighbors on the Hill
5. They were Brave and Bold
6. Building Better English (3, 4, 5)
7. Basic Science Series
   Trees, Reptiles, Toads and Frogs, Fishes, Birds in Our Backyard, The Insect Parade, Our Six-Legged Neighbors; Animals of the Seashore, Spiders, Animals of Yesterday

Scott, Foresman & Company

1. We Talk, Spell & Write, Book 2^2, Teachers Edition
2. We Talk, Spell & Write, Book 3^1, Teachers Edition
3. A Chart titled The Whaling Ship Pequod. (English Class)
4. Book titled Adventures With Animals by Sandrus
5. Book titled Surprise Island, by Warner
6. Book titled The Box Car Children by Warner
7. We Read More Pictures, Teachers Edition
8. We Read Pictures
9. We Talk, Spell & Write Book 1^1, Teachers Edition
10. We Talk, Spell & Write Book 1^2, Teachers Edition
11. We Talk, Spell & Write Book 2^1
12. We Talk, Spell & Write Book 3^2
13. 2 Stopping Distance Charts, (from Let's Drive Right)

Silver Burdett Company

Arithmetic Text and Workbook

Webster Publishing Company

1. Spelling Books
2. "The New Goals in Spelling" (1 and 2)

Wheeler Publishing Company

1. Pilot Jack Knight
2. Cowboys and Cattle Trails
3. Buffalo Bill
4. Alec Majors
5. John Paul Jones
6. Friday, The Arapaho Indian

Wilcox & Follett Company

1. Phonics "Sounds We Use" Gr. 2

World Book Company

1. Building Word Power
2. Ready to Read — Work Book
3. The Rainbow Dictionary

APPENDIX F

Supplies Requested For Special Class Room

Pencils
Rulers
Painting supplies
Crayons
Art paper
Composition & arithmetic paper
Chalk & eraser
Scissors
Newsprint — ruled 24" x 36"
Manila primary paper — 1" lined 9" x 12"
Thermometer
Waste basket
Work table and chairs
Desk (teacher's) with lock
Desk chair

APPENDIX G

Detail of Table XIII

Class Enrollment at beginning of school year September, 1958

Western Control Group

		CTMM	I. Q.		
Name	Grade	L	N.L.	T	S-B
1 BL	6	75	61	68	50
2 BP	5	62	62	62	50
3 DJ	8	69	57	63	70
4 FF	6	—	—	—	67
5 HE	1	66	85	76	73
6 HL	4	78	63	68	68
7 HL	1	62	53	58	54
8 HS	6	75	60	62	52
9 LB	8	67	64	65	57
10 LC	7	57	82	69	75
11 MA	5	82	63	69	65
12 ME	2	74	68	71	64
13 PJ	4	68	73	71	73
14 PA	3	65	76	70	63
15 TP	3	—	—	—	67
Mdn I.Q.		69	64	69	65
Average I.Q.		69	67	67	63
Range		57—	53—	58—	50—
		82	85	76	75

Western Experimental

		CTMM	I. Q.		
Name	Grade	L	N.L.	T	S-B
1 BB	3	71	70	67	6
2 BS	7	68	80	75	[illegible]
3 CE	7	78	58	62	62
4 CR	4	58	58	58	56
5 GA	8	64	80	72	73
6 HL	2	81	63	73	70
7 HR	4	74	72	73	67
8 MM	5	80	68	74	71
9 NJ	6	62	82	72	70
10 PR	3	77	63	70	75
11 PH	7	62	59	59	69
12 WK	3	64	68	65	66
13 WR	6	68	71	70	68
14 WD	3	61	68	61	72
15 TE	7	63	55	59	70
16 YS	3	63	70	67	70
17 ME*	1	72	79	76	67
Mdn I.Q.		68	68	70	69
Average I.Q.		69	68	68	68
Range		58—	55—	58—	56—
		78	82	76	75

* It was found that there was an error in reporting the date of birth and subject was not eligible for the class.

Class Enrollment at beginning of school year September, 1958

Central Control Group

		CTMM	I. Q.		
Name	Grade	L	N.L.	T	S-B
1 BJ	6	69	60	65	53
2 BM	3	66	75	71	66
3 CA	3	65	66	65	57
4 CB	5	67	62	62	52
5 DK	3	71	69	70	72
6 ES	5	82	61	68	63
7 GJ	5	80	69	75	56
8 HJ	3	69	66	68	71
9 HB	5	61	61	61	59
10 HC	6	83	67	75	71
11 HC	3	88	55	72	72
12 HS	6	67	60	63	50
13 LM	8	72	62	67	67
14 MD	7	75	99	87	70
15 PD	3	68	89	79	71
16 PB	3	69	83	76	73
17 PW	3	70	69	70	75
18 RP	7	72	64	68	58
19 SC	3	70	77	74	62
20 SJ	2	71	57	64	71
21 SJ	4	71	74	73	55
22 SK	3	60	68	62	72
23 SA	2	56	56	56	55
24 WL	5	58	58	58	62
25 WR	6	69	67	69	69
26 WD	2	64	64	64	72
Mdn I.Q.		69	66	68	67
Average I.Q.		69	68	69	64
Range		56—	55—	56—	50—
		88	99	87	75

Central Experimental Group

		CTMM	I. Q.		
Name	Grade	L	N.L.	T	S-B
1 BC	1	60	60	60	71
2 BP	8	80	69	74	66
3 CJ	2	75	71	73	72
4 CS	7	68	72	70	51
5 CR	6	72	87	80	74
6 CB	7	84	64	74	71
7 DW	5	78	67	73	74
8 DM	2	73	77	74	62
9 FC	8	75	60	67	67
10 GD	2	63	62	62	74
11 GE	7	82	62	72	75
12 GR	5	64	85	74	72
13 GP	7	71	68	70	72
14 GB	2	67	76	72	71
15 GR	3	72	69	70	71
16 HB	3	74	89	82	58
17 HR	8	67	63	65	66
18 JR	6	80	64	72	69
19 MW	2	63	68	63	61
20 PR	7	79	57	69	64
21 PR	6	56	58	56	73
22 RC	3	61	62	61	60
23 RR	7	66	66	66	67
24 SE	6	62	62	62	50
25 SG	5	75	69	72	58
26 SH	5	64	64	64	55
27 SE	5	80	66	73	62
28 TP	6	72	88	80	65
29 VP	7	68	77	72	73
30 WE	7	74	63	68	72
31 YW	3	72	78	76	70
Mdn I.Q.		72	67	72	69
Average I.Q.		71	69	70	67
Range in I.Q.		56—	57—	56—	50—
		84	89	82	75

Class Enrollment at end of school year — June, 1959

Western Control

		CTMM	I. Q.		
Name	Grade	L	N.L.	T	S-B
1 BL	6	75	61	68	50
2 BP	5	62	62	62	50
3 DJ	8	69	57	63	70
4 FF	6	—	—	—	67
5 HL	1	62	53	58	54
6 HS	6	75	60	62	52
7 LB	8	67	64	65	57
8 LC	7	57	82	69	75
9 MA	5	82	63	69	65
10 ME	2	74	68	71	64
11 PJ	4	68	73	71	73
12 PA	3	65	76	70	63
13 TP	3	—	—	—	67
Median I.Q.		68	63	68	64
Average I.Q.		69	65	66	62
Range		57— 82	53— 82	58— 71	50— 75

Western Experimental

		CTMM	I. Q.		
Name	Grade	L	N.L.	T	S-B
1 BB	3	71	70	67	64
2 BS	7	68	80	75	67
3 CE	7	78	58	62	62
4 CR	4	58	58	58	56
5 GA	7	64	80	72	73
6 HL	2	81	63	73	70
7 HR	4	74	72	73	67
8 MM	5	80	68	74	71
9 NJ	6	62	82	72	70
10 PH	7	62	59	59	69
11 WK	3	64	68	65	66
12 WD	3	61	68	61	72
13 YS	3	63	70	67	70
Median I.Q.		64	68	67	69
Average I.Q.		68	69	68	67
Range		58— 81	58— 82	58— 75	56— 73

Class Enrollment at end of school year — June, 1959

Central Control

		CTMM	I. Q.		
Name	Grade	L	N.L.	T	S-B
1 BJ	6	69	60	65	53
2 BM	3	66	75	71	66
3 CA	3	65	66	65	57
4 CB	5	67	62	62	52
5 DK	3	71	69	70	72
6 ES	5	82	61	68	63
7 GJ	5	80	69	75	56
8 HJ	3	69	66	68	71
9 HB	5	61	61	61	59
10 HC	6	83	67	75	71
11 HS	6	67	60	63	50
12 LM	8	72	62	67	67
13 MD	7	75	99	87	70
14 PD	3	68	89	79	71
15 PB	3	69	83	76	73
16 PW	3	70	69	70	75
17 SC	3	70	77	74	62
18 SJ	2	71	57	64	71
19 SJ	4	71	74	73	55
20 WL	5	58	58	58	62
21 WR	6	69	67	69	69
22 WD	2	64	64	64	72
Median I.Q.		69	67	68	67
Average I.Q.		70	69	69	64
Range		58— 83	57— 99	58— 87	58— 75

Central Experimental

		CTMM	I. Q.		
Name	Grade	L	N.L.	T	S-B
1 BC	1	60	60	60	71
2 BP	8	80	69	74	66
3 CJ	2	75	71	73	72
4 CS	7	68	72	70	51
5 CB	7	84	64	74	71
6 DM	2	73	77	74	62
7 FC	8	75	60	67	67
8 GP	7	71	68	70	72
9 GB	2	67	76	72	71
10 GR	3	72	69	70	71
11 HB	3	74	89	82	58
12 HR	8	67	63	65	66
13 JR	6	80	64	72	69
14 MW	2	63	68	63	61
15 PR	7	79	57	69	64
16 RC	3	61	62	61	60
17 RR	7	66	66	66	67
18 SE	6	62	62	62	50
19 SG	5	75	69	72	58
20 SH	5	64	64	64	55
21 SE	5	80	66	73	62
22 VP	7	68	77	72	73
23 WE	7	74	63	68	72
24 YW	3	72	78	76	70
Median I.Q.		72	67	70	67
Average I.Q.		71	68	70	65
Range		60— 84	57— 89	60— 82	51— 73

APPENDIX H

Individual Results on California Achievement Test, 1958 and 1959

20 COMMUNITIES (72)

Average gains by test levels

READING

		Reading Vocabulary				Reading Comprehension				Total Reading				
Name	S-B	Oct. '58	May '59	Gain	Loss	Oct. '58	May '59	Gain	Loss	Oct. '58	May '59	Gain	Loss	Av. gains by test levels
(12) Lower Primary														
1 BC	71	1.2	1.7	0.5		1.3—	1.3—	0.0		1.2	1.5	0.3		
2 CJ	72	1.6	2.6	1.0		1.3—	2.1	0.8		1.4	2.4	1.0		
3 DM	62	2.5	3.7	1.2		2.0	2.9	0.9		2.3	3.3	1.0		
4 GB	71	1.2	1.5	0.3		1.3—	1.7	0.4		1.2	1.6	0.4		
5 HL	54	1.0	1.2	0.2		1.3—	1.3—	0.0		1.1	1.2	0.1		
6 HL	70	2.1	2.3	0.2		1.7	2.0	0.3		1.9	2.2	0.3		
7 MW	61	1.5	1.6	0.1		1.5	1.7	0.2		1.5	1.7	0.2		
8 ME	64	1.9	3.3	1.4		2.0	2.7	0.7		2.0	3.0	1.0		
9 PW	75	2.2	3.2	1.0		1.7	1.9	0.2		2.0	2.6	0.6		
10 SJ	71	1.8	1.3		0.5	1.3—	2.0	0.7		1.5	1.7	0.2		
11 TP	67	1.5	1.4		0.1	1.3—	2.7	1.4		1.4	2.1	0.7		
12 WD	72	2.0	1.7		0.3	1.9	1.9	0.0		2.0	1.8		0.2	0.5
(19) Upper Primary														
13 BB	64	1.7	3.0	1.3		2.5	3.2	0.7		2.1	3.1	1.0		
14 BM	66	2.6	3.2	0.6		2.5	2.9	0.4		2.6	3.1	0.5		
15 CA	57	2.9	3.1	0.2		2.9	2.8		0.1	2.9	3.1	0.2		
16 CR	56	3.8	4.2	0.4		3.8	4.1	0.3		3.8	4.2	0.4		
17 DK	72	1.8	3.1	1.3		1.9	2.4	0.5		1.9	2.8	0.9		
18 GR	71	1.5	2.1	0.6		1.5—	1.9	0.4		1.5	2.0	0.5		
19 HJ	71	1.7	1.5		0.2	2.1	2.1	0.0		1.9	1.8		0.1	
20 HB	58	3.0	4.2	1.2		4.0	4.6	0.6		3.5	4.4	0.9		
21 HR	67	1.7	3.5	1.8		3.2	4.1	0.9		2.5	3.8	1.3		
22 PJ	73	4.1	4.4	0.3		3.3	4.1	0.8		3.7	4.3	0.6		
23 PB	73	3.0	2.9		0.1	2.6	3.3	0.7		2.8	3.1	0.3		
24 PD	71	2.8	3.0	0.2		2.5	3.1	0.6		2.7	3.1	0.4		
25 PA	63	1.5	1.6	0.1		1.9	2.0	0.1		1.7	1.8	0.1		
26 RC	60	1.7	1.8	0.1		2.3	2.5	0.2		2.0	2.2	0.2		
27 SC	62	1.5	1.5	0.0		1.5—	1.7	0.2		1.5	1.6	0.1		
28 WK	66	1.7	2.1	0.4		1.9	2.2	0.3		1.8	2.2	0.4		
29 WD	72	2.8	4.1	1.3		3.5	4.0	0.5		3.2	4.1	0.9		
30 YS	70	3.8	4.7	0.9		3.6	4.6	1.0		3.7	4.7	1.0		
31 YW	70	2.0	2.2	0.2		1.3	1.8	0.5		1.7	2.0	0.3		0.5
(22) Elementary														
32 BL	50	3.3	3.5	0.2		3.2	3.2	0.0		3.3	3.4	0.1		
33 BJ	53	3.1	4.2	1.1		3.4	4.0	0.6		3.3	4.1	0.8		
34 BP	50	2.0	2.0—	0.0		3.0	2.0—		1.0	2.5	2.0—		0.5	
35 CB	52	2.7	3.3	0.6		2.5	2.7	0.2		2.6	3.0	0.4		
36 ES	63	2.7	3.7	1.0		2.2	3.3	1.1		2.5	3.5	1.0		
37 FF	67	5.7	6.2	0.5		5.6	4.7		0.9	5.7	5.5		0.2	
38 GJ	56	4.7	5.8	1.1		3.2	5.3	2.1		4.2	5.6	1.4		
39 HB	59	2.8	3.5	0.7		2.4	4.6	2.2		2.6	4.1	1.5		
40 HC	71	3.9	5.2	1.3		4.5	4.2		0.3	4.2	4.7	0.5		
41 HS	50	3.5	3.0		0.5	3.3	3.6	0.3		3.4	3.3		0.1	
42 HS	52	2.7	3.1	0.4		2.4	2.8	0.4		2.6	3.0	0.4		
43 JR	69	5.0	6.0	1.0		3.0	6.2	3.2		4.0	6.1	2.1		
44 MA	65	2.7	3.1	0.4		3.2	2.8		0.4	3.0	3.0	0.0		
45 MM	71	5.0	4.5		0.5	4.1	4.9	0.8		4.6	4.7	0.1		
46 NJ	72	3.4	4.2	0.8		3.5	3.0		0.5	3.5	3.6	0.1		
47 SE	58	3.0	3.4	0.4		2.2	2.6	0.4		2.6	3.0	0.4		
48 SG	50	2.0	3.5	1.5		2.2	2.0		0.2	2.1	2.8	0.7		
49 SJ	55	2.3	4.6	2.3		2.3	3.4	1.1		2.3	4.0	1.7		
50 SH	55	3.5	3.7	0.2		2.5	2.6	0.1		3.0	3.2	0.2		
51 SE	62	2.4	2.8	0.4		2.2	4.8	2.6		2.3	3.8	1.5		
52 WL	62	2.8	2.6		0.2	3.5	2.5		1.0	3.2	2.6		0.6	
53 WR	69	2.4	3.5	1.1		3.5	2.8		0.7	3.0	3.2	0.2		0.5

READING (Continued)

		Reading Vocabulary				Reading Comprehension				Total Reading				
Name	S-B	Oct. '58	May '59	Gain	Loss	Oct. '58	May '59	Gain	Loss	Oct. '58	May '59	Gain	Loss	Av. gains by test levels
(19) Junior H.S.														
54 BP	66	4.7	4.5		0.2	4.0	5.8	1.8		4.4	5.2	0.8		
55 BS	67	4.8	4.2		0.6	5.6	5.4		0.2	5.2	4.8		0.4	
56 CE	62	6.4	5.1		1.3	5.0	4.9		0.1	5.7	5.0		0.7	
57 CS	51	5.2	6.4	1.2		4.6	5.0	0.4		4.9	5.7	0.8		
58 CB	71	6.5	7.6	1.1		4.8	5.8	1.0		5.7	6.7	1.0		
59 DJ	70	4.7	4.0—		0.7	5.6	4.0—		1.6	5.2	4.0—		1.2	
60 FC	67	4.9	5.6	0.7		4.0	5.8	1.8		4.5	5.7	1.2		
61 GA	73	5.2	4.7		0.5	5.3	5.0		0.3	5.3	4.9		0.4	
62 GP	72	4.9	6.3	1.4		6.0	5.4		0.6	5.5	5.9	0.4		
63 HR	66	5.4	4.6		0.8	5.9	6.2	0.3		5.7	5.4		0.3	
64 LM	67	5.0	6.5	1.5		4.6	5.8	1.2		4.8	6.2	1.4		
65 LB	57	4.5	5.0	0.5		4.5	5.3	0.8		4.5	5.2	0.7		
66 LC	75	4.7	4.7	0.0		5.6	4.6		1.0	5.2	4.7		0.5	
67 MD	70	5.2	6.5	1.3		5.4	5.9	0.5		5.3	6.2	0.9		
68 PR	64	4.4	6.8	2.4		5.4	4.8		0.6	4.9	5.8	0.9		
69 PH	69	4.5	4.0—		0.5	4.5	4.5	0.0		4.5	4.2		0.3	
70 RR	67	4.4	4.0—		0.4	4.0	4.0—	0.0		4.2	4.0—		0.2	
71 VP	73	6.7	7.7	1.0		6.4	7.0	0.6		6.6	7.4	0.8		
72 WE	72	5.2	7.0	1.8		5.8	5.6		0.2	5.5	6.3	0.8		0.3
Average gain by group				0.5				0.4						0.5

ARITHMETIC

		Arithmetic Reasoning				Arithmetic Fundamentals				Total Arithmetic				
Name	S-B	Oct. '58	May '59	Gain	Loss	Oct. '58	May '59	Gain	Loss	Oct. '58	May '59	Gain	Loss	Av. gains by test levels
(12) Lower Primary														
1 BC 8	71	1.1	1.7	0.6		1.2	1.1—		0.1	1.2	1.4	0.2		
2 CJ	72	1.6	2.1	0.5		1.3	2.1	0.8		1.5	2.1	0.6		
3 DM	62	1.6	2.3	0.7		2.6	4.1	1.5		2.1	3.2	1.1		
4 GB	71	1.0	1.8	0.8		1.1—	1.8	0.7		1.0	1.8	0.8		
5 HL	54	1.0—	1.0—	0.0		1.1—	1.2	0.1		1.1—	1.1	0.0		
6 HL	70	1.6	2.0	0.4		1.3	1.6	0.3		1.5	1.8	0.3		
7 MW	61	1.4	2.1	0.7		1.7	3.5	1.8		1.6	2.8	1.2		
8 ME	64	1.7	2.3	0.6		1.2	2.0	0.8		1.5	2.2	0.7		
9 PW	75	2.0	2.9	0.9		2.5	4.8	2.3		2.3	3.9	1.6		
10 SJ	71	1.3	1.4	0.1		1.3	1.7	0.4		1.3	1.6	0.3		
11 TP	67	1.5	1.7	0.2		2.8	2.8	0.0		2.2	2.3	0.1		
12 WD	72	1.6	2.1	0.5		2.3	4.8	2.5		2.0	3.5	1.5		0.7
(19) Upper Primary														
13 BB	64	2.0	3.3	1.3		3.6	3.8	0.2		2.8	3.6	0.8		
14 BM	66	2.5	2.3		0.2	2.5	3.3	0.8		2.5	2.8	0.3		
15 CA	57	2.5	2.8	0.3		2.5	2.5	0.0		2.5	2.6	0.1		
16 CR	56	2.3	3.5	1.2		2.1	2.4	0.3		2.2	3.0	0.8		
17 DK	72	1.6	2.8	1.2		2.2	3.9	1.7		1.9	3.4	1.5		
18 GR	71	1.6	2.6	1.0		2.4	3.2	0.8		2.0	2.9	0.9		
19 HJ	71	1.6	1.5		0.1	1.8	2.1	0.3		1.7	1.8	0.1		
20 HB	58	4.3	4.4	0.1		4.3	4.3	0.0		4.3	4.4	0.1		
21 HR	67	2.6	3.9	1.3		3.3	3.4	0.1		3.0	3.7	0.7		
22 PJ	73	3.2	4.6	1.4		4.1	5.2	1.1		3.7	4.9	1.2		
23 PB	73	2.9	2.9	0.0		2.9	3.3	0.4		2.9	3.1	0.2		
24 PD	71	2.8	3.0	0.2		2.2	3.1	0.9		2.5	3.1	0.6		
25 PA	63	2.3	2.0		0.3	2.3	2.6	0.3		2.3	2.3	0.0		
26 RC	60	1.4	2.6	1.2		1.8	2.5	0.7		1.6	2.6	1.0		
27 SC	62	1.4—	1.5	0.1		1.3—	1.7	0.4		1.3	1.6	0.3		
28 WK	66	2.0	2.1	0.1		1.4	2.5	1.1		1.7	2.3	0.6		
29 WD	72	2.3	3.2	0.9		3.6	4.0	0.4		3.0	3.6	0.6		
30 YS	70	3.8	4.2	0.4		3.5	3.8	0.3		3.7	4.0	0.3		
31 YW	70	1.5	2.3	0.8		2.1	3.4	1.3		1.8	2.9	1.1		0.6

ARITHMETIC (Continued)

		Arithmetic Reasoning				Arithmetic Fundamentals				Total Arithmetic				
Name	S-B	Oct. '58	May '59	Gain	Loss	Oct. '58	May '59	Gain	Loss	Oct. '58	May '59	Gain	Loss	Av. gains by test levels
(22) Elementary														
32 BL	50	3.3	4.1	0.8		4.8	3.8		1.0	4.1	4.0		0.1	
33 BJ	53	3.9	4.4	0.5		4.7	3.8		0.9	4.3	4.1		0.2	
34 BP	50	2.9	2.0		0.9	3.6	2.5—		1.1	3.3	2.2		1.1	
35 CB	72	4.5	4.1		0.4	3.9	5.4	1.5		4.2	4.8	0.6		
36 ES	63	3.6	2.7	0.9		3.7	3.5		0.2	3.7	3.1		0.6	
37 FF	67	5.0	5.3	0.3		6.5	5.7		0.8	5.8	5.5		0.3	
38 GJ	56	4.0	4.2	0.2		5.3	5.4	0.1		4.7	4.8	0.1		
39 HB	59	2.5	3.8	1.3		3.7	4.2	0.5		3.1	4.0	0.9		
40 HC	71	4.2	4.4	0.2		4.0	4.8	0.8		4.1	4.6	0.5		
41 HS	50	2.9	3.2	0.3		3.9	4.0	0.1		3.4	3.6	0.2		
42 HS	52	2.7	3.4	0.7		4.0	3.6		0.4	3.4	3.5	0.1		
43 JR	69	6.3	6.7	0.4		5.1	6.4	1.3		5.7	6.6	0.9		
44 MA	65	3.9	3.5		0.4	3.9	4.8	0.9		3.9	4.2	0.3		
45 MM	71	4.1	4.7	0.6		3.9	5.1	1.2		4.0	4.9	0.9		
46 NJ	72	3.9	3.4		0.5	5.2	4.4		0.8	4.6	3.9		0.7	
47 SE	58	2.3	3.1	0.8		2.8	3.4	0.6		2.6	3.3	0.7		
48 SG	50	2.3	3.5	1.2		2.9	5.1	2.2		2.6	4.3	1.7		
49 SJ	55	3.5	4.5	1.0		3.8	4.2	0.4		3.7	4.4	0.7		
50 SH	55	2.9	3.1	0.2		3.6	4.4	0.8		3.3	3.8	0.5		
51 SE	62	2.7	6.1	3.4		3.9	6.9	3.0		3.3	6.5	3.2		
52 WL	62	3.3	3.5	0.2		4.2	3.6		0.6	3.8	3.6		0.2	
53 WR	69	3.6	4.1	0.5		4.2	4.0		0.2	3.9	4.1	0.2		0.4
(19) Junior H.S.														
54 [illegible]P	66	4.7	4.7	0.0		4.3	4.9	0.6		4.5	4.8	0.3		
55 BS	67	4.9	6.0	1.1		5.1	5.2	0.1		5.0	5.6	0.6		
56 CE	62	4.5	6.7	2.2		4.5	4.6	0.1		4.5	5.7	1.2		
57 CS	51	4.2	5.1	0.9		5.7	4.5		1.2	5.0	4.8		0.2	
58 CB	71	4.1	6.4	2.3		6.1	7.1	1.0		5.1	6.8	1.7		
59 DJ	70	4.5	4.9	0.4		5.0	6.2	1.2		4.8	5.6	0.8		
60 FC	67	5.7	5.1		0.6	5.3	5.7	0.4		5.5	5.4		0.1	
61 GA	73	4.4	4.0		0.4	5.3	5.4	0.1		4.9	4.7		0.2	
62 GP	72	6.0	6.4	0.4		6.6	5.9		0.7	6.3	6.2		0.1	
63 HR	66	4.4	8.5	4.1		5.4	5.4	0.0		4.9	7.0	2.1		
64 LM	67	5.7	6.0	0.3		5.0	4.9		0.1	5.4	5.5	0.1		
65 LB	57	4.0	4.0	0.0		5.8	5.2		0.6	4.9	4.6		0.3	
66 LC	75	4.2	4.7	0.5		5.0	4.7		0.3	4.6	4.7	0.1		
67 MD	70	6.2	6.4	0.2		5.9	6.4	0.5		6.1	6.4	0.3		
68 PR	64	4.3	5.7	1.4		4.4	5.0	0.6		4.4	5.4	1.0		
69 PH	69	4.7	4.4		0.3	5.4	5.8	0.4		5.1	5.1	0.0		
70 RR	67	4.0	4.0	0.0		4.3	4.3	0.0		4.2	4.2	0.0		
71 VP	73	5.9	8.8	2.9		7.4	8.8	1.4		6.7	8.8	2.1		
72 WE	72	4.7	4.4		0.3	5.3	6.1	0.8		5.0	5.3	0.3		0.5
Average gain by group				0.6				0.5						0.5

LANGUAGE

Average gains by test levels

		Mechanics of English				Spelling				Total Language				
Name	S-B	Oct. '58	May '59	Gain	Loss	Oct. '58	May '59	Gain	Loss	Oct. '58	May '59	Gain	Loss	Av. gains by test levels
(12) Lower Primary														
1 BC	71	1.2	1.4	0.2		1.4—	1.4—	0.0		1.3	1.4	0.1		
2 CJ	72	1.4	1.7	0.3		1.4—	2.0	0.6		1.4	1.9	0.5		
3 DM	62	1.5	1.8	0.3		1.4—	2.4	1.0		1.4	2.1	0.7		
4 GB	71	1.0—	1.6	0.6		1.3—	1.4—	0.1		1.1—	1.5	0.4		
5 HL	54	1.0—	1.1	0.1		1.4—	1.4—	0.0		1.2—	1.2	0.0		
6 HL	70	1.7	1.9	0.2		1.4	1.4	0.0		1.6	1.7	0.1		
7 MW	61	1.2—	1.8	0.6		1.4—	1.7	0.3		1.3—	1.8	0.5		
8 ME	64	1.4	1.9	0.5		2.4	4.9	2.5		1.9	3.4	1.5		
9 PW	75	2.1	2.2	0.1		1.4	1.7	0.3		1.8	2.0	0.2		
10 SJ	71	1.5	1.7	0.2		1.4—	1.4	0.0		1.4	1.6	0.2		
11 TP	67	1.6	1.6	0.0		1.4	1.4	0.0		1.5	1.5	0.0		
12 WD	72	1.6	1.9	0.3		1.4—	1.7	0.3		1.5	1.8	0.3		0.4

LANGUAGE (Continued)

		Mechanics of English				Spelling				Total Language				
Name	S-B	Oct. '58	May '59	Gain	Loss	Oct. '58	May '59	Gain	Loss	Oct. '58	May '59	Gain	Loss	Av. gains by test levels
(19) Upper Primary														
13 BB	64	2.2	3.6	1.4		2.5	3.1	0.6		2.4	3.4	1.0		
14 BM	66	1.9	2.7	0.8		2.2	3.4	1.2		2.1	3.1	1.0		
15 CA	57	1.3	1.6	0.3		1.6	2.2	0.6		1.5	1.8	0.3		
16 CR	56	3.3	3.4	0.1		2.2	2.9	0.7		2.8	3.2	0.4		
17 DK	72	2.3	3.1	0.8		1.9	3.4	1.5		2.1	3.3	1.2		
18 GR	71	1.2—	1.3	0.1		1.4—	1.4—	0.0		1.3—	1.3	0.0		
19 HJ	71	1.7	2.0	0.3		1.4—	2.2	0.8		1.5	2.1	0.6		
20 HB	58	3.5	3.6	0.1		3.1	5.6	2.5		3.3	4.6	1.3		
21 HR	67	3.2	3.3	0.1		2.2	3.4	1.2		2.7	3.4	0.7		
22 PJ	73	2.7	3.4	0.7		5.4	5.4	0.0		4.1	4.4	0.3		
23 PB	73	2.8	3.3	0.5		1.9	2.9	1.0		2.4	3.1	0.7		
24 PD	71	3.4	3.6	0.2		2.9	3.9	1.0		3.2	3.8	0.6		
25 PA	63	1.8	2.4	0.6		1.4	1.4—	0.0		1.6	1.9	0.3		
26 RC	60	1.7	2.2	0.5		1.9	2.5	0.6		1.8	2.4	0.6		
27 SC	62	1.6	1.4		0.2	1.4—	1.4—	0.0		1.5	1.4		0.1	
28 WK	66	1.2—	2.8	1.6		1.4—	1.4—	0.0		1.3—	2.1	0.8		
29 WD	72	3.1	3.6	0.5		3.1	4.7	1.6		3.1	4.2	1.1		
30 YS	70	3.7	4.3	0.6		4.4	5.0	0.6		4.1	4.7	0.6		
31 YW	70	1.0—	1.6	0.6		1.4—	1.9	0.5		1.2—	1.8	0.6		0.6
(22) Elementary														
32 BL	50	3.7	4.5	0.8		2.1	3.0	0.9		2.9	3.8	0.9		
33 BJ	53	3.1	3.0		0.1	2.4	2.1		0.3	2.8	2.6		0.2	
34 BP	50	2.5	2.0—		0.5	2.0	2.0—	0.0		2.2	2.0—		0.2	
35 CB	52	3.8	3.7		0.1	3.3	3.3	0.0		3.6	3.5		0.1	
36 ES	63	3.6	3.7	0.1		3.3	4.0	0.7		3.5	3.9	0.4		
37 FF	67	4.5	6.6	2.2		3.6	7.7	4.1		4.1	7.2	3.1		
38 GJ	56	5.4	5.6	0.2		6.2	5.9		0.3	5.8	5.8	0.0		
39 HB	59	3.9	3.5		0.4	2.4	2.7	0.3		3.2	3.1		0.1	
40 HC	71	4.0	3.7		0.3	3.6	4.0	0.4		3.8	3.9	0.1		
41 HS	50	3.9	3.7		0.2	2.7	4.6	1.9		3.3	4.2	0.9		
42 HS	52	3.9	3.7		0.2	2.7	2.7	0.0		3.3	3.2		0.1	
43 JR	69	3.9	4.9	1.0		4.0	4.6	0.6		4.0	4.8	0.8		
44 MA	65	3.9	3.0		0.9	3.6	3.8	0.2		3.8	3.4		0.4	
45 MM	71	3.7	4.6	0.9		4.3	4.6	0.3		4.0	4.6	0.6		
46 NJ	72	3.9	3.1		0.8	3.3	4.0	0.7		3.6	3.6	0.0		
47 SE	58	2.5	4.3	1.8		3.0	3.3	0.3		2.8	3.8	1.0		
48 SG	50	2.6	3.9	1.3		2.1	3.0	0.9		2.4	3.5	1.1		
49 SJ	55	3.0	4.3	1.3		5.3	4.0		1.3	4.2	4.2	0.0		
50 SH	55	2.7	3.6	0.9		4.0	3.0		1.0	3.4	3.3		0.1	
51 SE	62	2.7	4.9	2.2		2.1	4.3	2.2		2.4	4.6	2.2		
52 WL	62	3.8	3.9	0.1		2.1	3.6	1.5		3.0	3.8	0.8		
53 WR	69	3.9	3.7		0.2	2.7	3.8	1.1		3.3	3.8	0.5		0.5
(19) Junior H.S.														
54 BP	66	4.0	4.0—	0.0		4.0	5.4	1.4		4.0	4.7	0.7		
55 BS	67	5.8	5.2		0.6	4.4	4.0—		0.4	5.1	4.6		0.5	
56 CE	62	5.0	4.4		0.6	6.3	6.0		0.3	5.7	5.2		0.5	
57 CS	51	4.7	4.2		0.5	4.4	4.0—		0.3	4.6	4.1		0.5	
58 CB	71	5.3	6.8	1.5		4.4	5.1	0.7		4.9	6.0	1.1		
59 DJ	70	4.2	4.0		0.2	4.8	4.0		0.8	4.5	4.0		0.5	
60 FC	67	3.4	4.1	0.7		5.1	4.0—		1.1	4.3	4.0		0.3	
61 GA	73	5.0	4.0		1.0	4.0	4.8	0.8		4.5	4.4		0.1	
62 GP	72	5.8	6.6	0.8		4.0	4.8	0.8		4.9	5.7	0.8		
63 HR	66	5.5	6.1	0.6		4.0	5.1	1.1		4.8	5.6	0.8		
64 LM	67	5.2	4.7		0.5	4.4	4.8	0.4		4.8	4.8	0.0		
65 LB	57	4.1	4.0—		0.1	4.0	5.1	1.1		4.1	4.5	0.4		
66 LC	75	4.0	4.4	0.4		4.0	4.4—	0.4		4.0	4.2	0.2		
67 MD	70	5.7	5.4		0.3	4.0	4.0—	0.0		4.9	4.7		0.2	
68 PR	64	5.5	4.0—		1.5	6.5	4.0—		2.5	6.0	4.0—		2.0	
69 PH	69	4.0	4.1	0.1		4.0	5.8	1.8		4.0	5.0	1.0		
70 RR	67	3.1	4.0—	0.9		3.0	4.0—	1.0		3.1	4.0—	0.9		
71 VP	73	6.5	6.8	0.3		6.5	7.2	0.7		6.5	7.0	0.5		
72 WE	72	3.9	6.6	2.7		3.6	5.8	2.2		3.8	6.2	2.4		0.2
Average gain by group				0.3				0.5						0.4

TOTAL BATTERY

Name	S-B	'58	'59	Gain	Loss	Av. gains by test levels
(12) Lower Primary						
1 BC	71	1.2	1.4	0.2		
2 CJ	72	1.4	2.1	0.7		
3 DM	62	1.9	2.9	1.0		
4 GB	71	1.0	1.7	0.7		
5 HL	54	1.2—	1.2	0.0		
6 HL	70	1.6	1.9	0.3		
7 MW	61	1.5	2.1	0.6		
8 ME	64	1.8	2.9	1.1		
9 PW	75	2.0	2.8	0.8		
10 SJ	71	1.4	1.7	0.3		
11 TP	67	1.7	2.0	0.3		
12 WD	72	1.8	2.4	0.6		0.6
(19) Upper Primary						
13 BB	64	2.4	3.4	1.0		
14 BM	66	2.4	3.0	0.6		
15 CA	57	2.4	2.6	0.2		
16 CR	56	2.9	3.5	0.6		
17 DK	72	2.0	3.2	1.2		
18 GR	71	1.6	2.1	0.5		
19 HJ	71	1.7	2.0	0.3		
20 HB	58	3.7	4.5	0.8		
21 HR	67	2.7	3.6	0.9		
22 PJ	73	3.8	4.5	0.7		
23 PB	73	2.7	3.2	0.5		
24 PD	71	2.8	3.5	0.7		
25 PA	63	1.9	2.3	0.4		
26 RC	60	1.8	2.4	0.6		
27 SC	62	1.4	1.5	0.1		
28 WK	66	1.6	2.2	0.6		
29 WD	72	3.1	4.0	0.9		
30 YS	70	3.8	4.5	0.7		
31 YW	70	1.6	2.2	0.6		0.6
(22) Elementary						
32 BL	50	3.4	3.7	0.3		
33 BJ	53	3.5	3.6	0.1		
34 BP	50	2.7	2.1		0.6	
35 CB	52	3.5	3.8	0.3		
36 ES	63	3.2	3.5	0.3		
37 FF	67	5.2	6.1	0.9		
38 GJ	56	4.9	5.4	0.5		
39 HB	59	3.0	3.7	0.7		
40 HC	71	4.0	4.4	0.4		
41 HS	50	3.4	3.7	0.3		
42 HS	52	3.1	3.2	0.1		
43 JR	69	4.6	5.8	1.2		
44 MA	65	3.6	3.5		0.1	
45 MM	71	4.2	4.7	0.5		
46 NJ	72	3.9	3.7		0.2	
47 SE	58	2.7	3.4	0.7		
48 SG	50	2.4	3.5	1.1		
49 SJ	55	3.4	4.2	0.8		
50 SH	55	3.2	3.4	0.2		
51 SE	62	2.7	5.0	2.3		
52 WL	62	3.3	3.3	0.0		
53 WR	69	3.4	3.7	0.3		0.5

	Name	S-B	'58	'59	Gain	Loss	Av. gains by test levels
(19)	Junior H.S.						
	54 BP	66	4.4	4.9	0.5		
	55 BS	67	5.1	5.0		0.1	
	56 CE	62	5.3	5.3	0.0		
	57 CS	51	4.8	4.9	0.1		
	58 CB	71	5.2	6.5	1.3		
	59 DJ	70	4.8	4.5		0.3	
	60 FC	67	4.8	5.0	0.2		
	61 GA	73	4.9	4.7		0.2	
	62 GP	72	5.6	5.9	0.3		
	63 HR	66	5.1	6.0	0.9		
	64 LM	67	5.0	5.5	0.5		
	65 LB	57	4.5	4.8	0.3		
	66 LC	75	4.6	4.5		0.1	
	67 MD	70	5.4	5.8	0.4		
	68 PR	64	5.1	5.1	0.0		
	69 PH	69	4.5	4.8	0.3		
	70 RR	67	3.8	4.1	0.3		
	71 VP	73	6.6	7.7	1.1		
	72 WE	72	4.8	5.9	1.1		0.3
	Average gain by group						0.5

APPENDIX I

Individual Results on Core Achievement Test

Western Control (13)

		Cores 1 & 2 (39)			Reading Readiness (53)			Cores 3 & 4 (61)			Core 5 Boys (45)			Core 5 Girls (45)			Core 6 (78)		
Name	S-B	Oct. '58	May '59	Gain	Oct. '58	May '59	Gain	Oct. '58	May '59	Gain	Oct. '58	May '59	Gain	Oct. '58	May '59	Gain	Oct. '58	May '59	Gain
1 BL	50	34	35	1				37	37	0				28	28	0	39	47	8
2 BP	50	22	35	13															
3 DJ	70	39	39	0				47	49	2	35	37	2				62	57	—5
4 FF	67	35	38	3				48	52	4				35	36	1	58	61	3
5 HL	54	22	18	—4	4	18	14												
6 HS	52	36	36	0				32	35	3	20	31	11				35	41	6
7 LB	57	35	39	4				44	40	—4	30	32	2				47	49	2
8 LC	75	38	38	0				40	47	7	27	37	10				55	59	4
9 MA	65	26	31	5				30	36	6	23	24	1				40	41	1
10 ME	64	33	38	5	43	47	4	36	35	—1									
11 PJ	73	31	34	3				42	36	—6									
12 PA	63	34	37	3	47	41	—6	44	44	0									
13 TP	67	35	38	3	37	38	1												

	Cores 7 & 8 (162)			Mathematical Concepts (79)			Reading Achievement (145)			Total Score		
Name	Oct. '58	May '59	Gain	Oct. '58	May '59	Gain	Oct. '58	May '59	Gain	Oct. '58	May '59	Gain
1 BL	90	118	28	37	31	—6	92	95	3	357	391	34
2 BP										22	35	13
3 DJ	118	106	—12	54	57	3	69	46	—23	424	391	—33
4 FF	112	108	—4	56	58	2	132	121	—11	476	474	—2
5 HL										26	36	10
6 HS	78	79	1	30	30	0	22	31	9	253	283	30
7 LB	81	94	13	36	33	3	20	31	11	293	318	25
8 LC	99	107	8	53	51	—2	57	64	7	369	403	34
9 MA	81	70	—11	34	33	—1	75	79	4	309	314	5
10 ME				29	31	2	88	89	1	229	240	11
11 PJ				38	49	11	103	117	14	219	236	22
12 PA				29	26	—3				154	148	—6
13 TP										72	76	4

Western Experimental (13)

		Cores 1 & 2 (39)			Reading Readiness (53)			Cores 3 & 4 (61)			Core 5 Boys (45)			Core 5 Girls (45)			Core 6 (78)		
Name	S-B	Oct. '58	May '59	Gain	Oct. '58	May '59	Gain	Oct. '58	May '59	Gain	Oct. '58	May '59	Gain	Oct. '58	May '59	Gain	Oct. '58	May '59	Gain
1 BB	64	39	39	0				40	49	9									
2 BS	67	39	39	0				50	56	6				37	39	2	39	63	24
3 CE	62	38	39	1				46	52	6				39	37	—2	52	54	2
4 CR	56	37	37	0				43	47	4	38	36	—2				56	52	—4
5 GA	73	39	39	0				43	57	14	37	35	—2				68	65	—3
6 HL	70	28	33	5	40	48	8												
7 HR	67	34	35	1				40	50	10									
8 MM	71	38	39	1				42	52	10									
9 NJ	70	39	39	0				45	52	7	38	40	2				43	58	15
10 PH	69	33	38	5				47	56	9				32	36	4	53	62	9
11 WK	66	31	36	5				43	50	7	32	44	12						
12 WD	72	36	37	1				42	49	7									
13 YS	70	39	38	—1				40	50	10									

	Cores 7 & 8 (162)			Mathematical Concepts (79)			Reading Achievement (145)			Total Score		
Name	Oct. '58	May '59	Gain	Oct. '58	May '59	Gain	Oct. '58	May '59	Gain	Oct. '58	May '59	Gain
1 BB				42	54	12	72	100	28	193	242	49
2 BS	110	120	10	57	64	7	116	129	13	448	510	62
3 CE	99	99	0	29	37	8	121	121	0	424	439	15
4 CR	99	95	—4	28	40	12	130	128	—2	431	435	4
5 GA	115	114	—1	63	69	6	64	96	32	429	475	46
6 HL				27	27	0	67	75	8	162	183	21
7 HR				38	47	9	105	115	10	217	247	30
8 MM				58	65	7	118	125	7	256	281	25
9 NJ	101	111	10	49	65	16	27	77	50	342	442	100
10 PH	108	110	2	48	60	12	114	123	9	435	485	50
11 WK				33	38	5	31	62	31	170	230	60
12 WD				29	42	13	94	119	25	201	247	46
13 YS				41	48	7	124	134	10	244	270	26

Central Control (22)

		Cores 1 & 2 (39)			Reading Readiness (53)			Cores 3 & 4 (61)			Core 5 Boys (45)			Core 5 Girls (45)			Core 6 (78)		
Name	S-B	Oct. '58	May '59	Gain	Oct. '58	May '59	Gain	Oct. '58	May '59	Gain	Oct. '58	May '59	Gain	Oct. '58	May '59	Gain	Oct. '58	May '59	Gain
1 BJ	53	36	36	0				40	41	1	30	27	—3				42	46	4
2 BM	66	35	36	1	48	49	1	34	36	2									
3 CB	52	33	38	5				41	46	5									
4 DK	72	26	31	5	37	49	12	32	33	1									
5 ES	63	38	35	—3	51	51	0	38	43	5									
6 GJ	56	37	38	1				49	46	—3				34	31	—3	58	60	2
7 HJ	71	30	35	5	42	44	2												
8 HB	59	35	35	0	39	45	6	36	30	—6									
9 HC	71	34	35	1				34	40	6									
10 HS	50	30	36	6				37	42	5									
11 LM	67	38	39	1				43	43	0	29	31	2				56	55	1
12 MD	70	39	38	—1				45	45	0				36	39	3	55	62	7
13 PD	71	36	36	0				35	43	8									
14 PB	73	37	37	0	43	43	0	31	39	8									
15 PW	75	28	31	3	51	46	—5	36	21	—15									
16 SC	62	25	22	—3	31	35	4												
17 SJ	71	30	27	—3	37	44	7												
18 SJ	55	34	31	—3	47	47	0	30	37	7									
19 WL	62	36	33	—3				44	38	—6	30	37	7				47	47	0
20 WR	69	36	38	2	49	49	0	46	39	—7									
21 WD	72	33	35	2	44	43	—1	37	34	—3									
22 CA	57	21	25	4	41	45	4												

	Cores 7 & 8 (162)			Mathematical Concepts (79)			Reading Achievement (145)			Total Score		
Name	Oct. '58	May '59	Gain	Oct. '58	May '59	Gain	Oct. '58	May '59	Gain	Oct. '58	May '59	Gain
1 BJ	88	93	5	35	44	9	84	114	30	355	401	46
2 BM				28	33	5	80	102	22	225	256	31
3 CB				37	40	3	94	109	15	205	233	28
4 DK				26	36	10	65	93	28	186	242	56
5 ES				33	30	—3	55	73	18	215	232	17
6 GJ	110	113	3	43	49	6	123	131	8	454	468	14
7 HJ				21	19	—2	48	42	—6	141	140	—1
8 HB				24	26	2	32	57	25	166	193	27
9 HC				51	59	8	109	121	12	228	255	27
10 HS				24	32	8	68	78	10	159	188	29
11 LM	102	107	5	43	56	13	128	129	1	439	462	23
12 MD	107	103	—4	50	53	3	131	133	2	463	473	10
13 PD				36	46	10	84	107	23	191	232	41
14 PB				33	42	9	73	77	4	217	238	21
15 PW				40	49	9	60	91	31	215	238	23
16 SC				9	19	10	51	30	—21	116	106	—10
17 SJ				15	18	3	35	38	3	117	127	10
18 SJ				29	39	10	100	120	20	240	274	34
19 WL	97	81	—16	22	33	11	32	27	—5	308	296	—12
20 WR				52	53	1	106	107	1	289	286	—3
21 WD				31	37	6	53	54	1	198	203	5
22 CA				22	27	5	51	75	24	135	172	37

Central Experimental (24)

Name	S-B	Cores 1 & 2 (39) Oct. '58	May '59	Gain	Reading Readiness (53) Oct. '58	May '59	Gain	Cores 3 & 4 (61) Oct. '58	May '59	Gain	Core 5 Boys (45) Oct. '58	May '59	Gain	Core 5 Girls (45) Oct. '58	May '59	Gain	Core 6 (78) Oct. '58	May '59	Gain
1 BC	71	33	32	—1	39	39	0												
2 BP	66	39	39	0				49	50	1	33	39	6				56	65	9
3 CJ	72	34	37	3	42	49	7												
4 CS	51	38	38	0				36	40	4	31	34	3				48	52	4
5 CB	71	39	39	0				55	53	—2				42	43	1	63	63	0
6 DM	62	34	34	0	38	51	13												
7 FC	67	39	39	0				54	51	—3				37	41	4	62	65	3
8 GP	72	38	39	1				49	50	1	36	34	—2				56	63	7
9 GB	71	29	39	10	35	49	14												
10 GR	71	33	35	2				34	48	14									
11 HB	58	37	39	2				44	47	3									
12 HR	66	35	39	4				52	56	4				35	40	5	59	65	6
13 JR	69	39	39	0				47	51	4	38	39	1				59	72	13
14 MW	61	30	35	5	32	50	18												
15 PR	64	38	37	—1				47	46	—1							58	59	1
16 RC	60	35	37	2	42	45	3												
17 RR	67	38	39	1				50	52	2	37	38	1				62	63	1
18 SE	50	37	35	—2				49	49	0									
19 SG	58	37	37	0				43	48	5									
20 SH	55	32	37	5				36	46	10									
21 SE	62	38	38	0				38	47	9									
22 VP	73	39	39	0				52	49	—3				37	38	1	57	72	15
23 WE	72	39	39	0				46	53	7	37	41	4				57	68	11
24 YW	70	35	38	3	46	51	5												

Name	Cores 7 & 8 (162) Oct. '58	May '59	Gain	Mathematical Concepts (79) Oct. '58	May '59	Gain	Reading Achievement (145) Oct. '58	May '59	Gain	Total Score Oct. '58	May '59	Gain
1 BC				15	22	7	7	52	45	94	145	51
2 BP	127	127	0	43	43	0	91	106	15	438	469	31
3 CJ				25	29	4	50	87	37	151	202	51
4 CS	92	105	13	53	37	—16	71	88	17	369	394	25
5 CB	114	127	13	59	71	12	137	138	1	509	534	25
6 DM				24	34	10	26	80	54	122	199	77
7 FC	112	107	—5	49	56	7	112	133	21	465	492	27
8 GP	108	120	12	65	75	10	105	113	8	457	494	37
9 GB				9	31	22	5	61	56	78	180	102
10 GR				36	62	26	36	85	49	139	230	91
11 HB				48	61	13	119	136	17	248	283	35
12 HR	116	122	6	53	68	15	130	141	11	480	531	51
13 JR	112	124	12	68	75	7	131	139	8	494	539	45
14 MW				21	32	11	24	69	45	107	186	79
15 PR	104	118	14	32	56	24	123	136	13	402	452	50
16 RC				20	26	6	60	88	28	157	196	39
17 RR	111	118	7	50	58	8	66	87	21	414	455	41
18 SE				32	47	15	114	119	5	232	250	18
19 SG				32	47	15	79	85	6	191	217	26
20 SH				31	42	11	40	59	19	139	184	45
21 SE				61	68	7	107	121	14	244	274	30
22 VP	112	127	15	64	69	5	127	144	17	488	538	50
23 WE	113	136	23	50	58	8	136	135	—1	478	530	52
24 YW				35	45	10	42	76	34	158	210	52

Western Area (26)

		Cores 1 & 2 (39)			Reading Readiness (53)			Cores 3 & 4 (61)			Core 5 Boys (45)			Core 5 Girls (45)			Core 6 (78)		
Name	S-B	Oct. '58	May '59	Gain	Oct. '58	May '59	Gain	Oct. '58	May '59	Gain	Oct. '58	May '59	Gain	Oct. '58	May '59	Gain	Oct. '58	May '59	Gain
1 BL	50	34	35	1				37	37	0				28	28	0	39	47	8
2 BB	64	39	39	0				40	49	9									
3 BS	67	39	39	0				50	56	6				37	39	2	39	63	24
4 BP	50	22	35	13															
5 CE	62	38	39	1				46	52	6				39	37	—2	52	54	2
6 CR	56	37	37	0				43	47	4	38	36	—2				56	52	—4
7 DJ	70	39	39	0				47	49	2	35	37	2				62	57	—5
8 FF	67	35	38	3				48	52	4				35	36	1	58	61	3
9 GA	73	39	39	0				43	57	14	37	35	—2				68	65	—3
10 HL	54	22	18	—4	4	18	14												
11 HS	52	36	36	0				32	35	3	20	31	11				35	41	6
12 HL	70	28	33	5	40	48	8												
13 HR	67	34	35	1				40	50	10									
14 LB	57	35	39	4				44	40	—4	30	32	2				47	49	2
15 LC	75	38	38	0				40	47	7	27	37	10				55	59	4
16 MA	65	26	31	5				30	36	6	23	24	1				40	41	1
17 ME	64	33	38	5	43	47	4	36	35	—1									
18 MM	71	38	39	1				42	52	10									
19 NJ	70	39	39	0				45	52	7	38	40	2				43	58	15
20 PJ	73	31	34	3				42	36	—6									
21 PH	69	33	38	5				47	56	9				32	36	4	53	62	9
22 PA	63	34	37	3	47	41	—6	44	44	0									
23 TP	67	35	38	3	37	38	1												
24 WK	66	31	36	5				43	50	7	32	44	12						
25 WD	72	36	37	1				42	49	7									
26 YS	70	39	38	—1				40	50	10									

		Cores 7 & 8 (162)			Mathematical Concepts (79)			Reading Achievement (145)			Total Score		
	Name	Oct. '58	May '59	Gain	Oct. '58	May '59	Gain	Oct. '58	May '59	Gain	Oct. '58	May '59	Gain
1	BL	90	118	28	37	31	—6	92	95	3	357	391	34
2	BB				42	54	12	72	100	28	193	242	49
3	BS	110	120	10	57	64	7	116	129	13	448	510	62
4	BP										22	35	13
5	CE	99	99	0	29	37	8	121	121	0	424	439	15
6	CR	99	95	—4	28	40	12	130	128	—2	431	435	4
7	DJ	118	106	—12	54	57	3	69	46	—23	424	391	—33
8	FF	112	108	—4	56	58	2	132	121	—11	476	474	—2
9	GA	115	114	—1	63	69	6	64	96	32	429	475	46
10	HL										26	36	10
11	HS	78	79	1	30	30	0	22	31	9	253	283	30
12	HL				27	27	0	67	75	8	162	183	21
13	HR				38	47	9	105	115	10	217	247	30
14	LB	81	94	13	36	33	—3	20	31	11	293	318	25
15	LC	99	107	8	53	51	—2	57	64	7	369	403	34
16	MA	81	70	—11	34	33	—1	75	79	4	309	314	5
17	ME				29	31	2	88	89	1	229	240	11
18	MM				58	65	7	118	125	7	256	281	25
19	NJ	101	111	10	49	65	16	27	77	50	342	442	100
20	PJ				38	49	11	103	117	14	214	236	22
21	PH	108	110	2	48	60	12	114	123	9	435	485	50
22	PA				29	26	—3				154	148	—6
23	TP										72	76	4
24	WK				33	38	5	31	62	31	170	230	60
25	WD				29	42	13	94	119	25	201	247	46
26	YS				41	48	7	124	134	10	244	270	26

Central Area (46)

		Cores 1 & 2 (39)			Reading Readiness (53)			Cores 3 & 4 (61)			Core 5 Boys (45)			Core 5 Girls (45)			Core 6 (78)		
Name	S-B	Oct. '58	May '59	Gain	Oct. '58	May '59	Gain	Oct. '58	May '59	Gain	Oct. '58	May '59	Gain	Oct. '58	May '59	Gain	Oct. '58	May '59	Gain
1 BC	71	33	32	—1	39	39	0												
2 BP	66	39	39	0				49	50	1	33	39	6				56	65	9
3 BM	66	35	36	1	48	49	1	34	36	2									
4 CJ	72	34	37	3	42	49	7												
5 CS	51	38	38	0				36	40	4	31	34	3				48	52	4
6 CB	52	33	38	5				41	46	5									
7 CB	71	39	39	0				55	53	—2				42	43	1	63	63	0
8 DK	72	26	31	5	37	49	12	32	33	1									
9 DM	62	34	34	0	38	51	13												
10 ES	63	38	35	—3	51	51	0	38	43	5									
11 FC	67	39	39	0				54	51	—3				37	41	4	62	65	3
12 GP	72	38	39	1				49	50	1	36	34	—2				56	63	7
13 GB	71	29	39	10	35	49	14												
14 GR	71	33	35	2				34	48	14									
15 GJ	56	37	38	1				49	46	—3				34	31	—3	58	60	2
16 HJ	71	30	35	5	42	44	2												
17 HB	58	35	35	0	39	45	6	36	30	—6									
18 HC	71	34	35	1				34	40	6									
19 HS	50	30	36	6				37	42	5									
20 JR	69	39	39	0				47	51	4	38	39	1				59	72	13
21 LM	67	38	39	1				43	43	0	29	31	2				56	55	—1
22 MD	70	39	38	—1				45	45	0				36	39	3	55	62	7
23 MW	61	30	35	5	32	50	18												
24 PR	64	38	37	—1				47	46	—1							58	59	1
25 PD	71	36	36	0				35	43	8									
26 PB	73	37	37	0	43	43	0	31	39	8									
27 PW	75	28	31	3	51	46	—5	36	21	—15									
28 RC	60	35	37	2	42	45	3												
29 RR	67	38	39	1				50	52	2	37	38	1				62	63	1
30 SE	50	37	35	—2				49	49	0									
31 SG	58	37	37	0				43	48	5									
32 SC	62	25	22	—3	31	35	4												
33 SJ	71	30	27	—3	37	44	7												
34 SJ	55	34	31	—3	47	47	0	30	37	7									
35 SH	55	32	37	5	36	46	10												
36 SE	62	38	38	0				38	47	9									
37 VP	73	39	39	0				52	49	—3				37	38	1	57	72	15
38 WL	62	36	33	—3				44	38	—6	30	37	7				47	47	0
39 WE	72	39	39	0				46	53	7	37	41	4				57	68	11
40 WR	69	36	38	2	49	49	0	46	39	—7									
41 WD	72	33	35	2	44	43	—1	37	34	—3									
42 CA	57	21	25	4	41	45	4												
43 YW	70	35	38	3	46	51	5												
44 HB	58	37	39	2				44	47	3									
45 HR	66	35	39	4				52	56	4				35	40	5	59	65	6
46 BJ	53	36	36	0				40	41	1	30	27	—3				42	46	4

		Cores 7 & 8 (162)			Mathematical Concepts (79)			Reading Achievement (145)			Total Score		
	Name	Oct. '58	May '59	Gain	Oct. '58	May '59	Gain	Oct. '58	May '59	Gain	Oct. '58	May '59	Gain
1	BC				15	27	7	7	52	45	94	145	51
2	BP	127	127	0	43	43	0	91	106	15	438	469	31
3	BM				28	33	5	80	102	22	225	256	31
4	CJ				25	29	4	50	87	37	151	202	51
5	CS	92	105	13	53	37	—16	71	88	17	369	394	25
6	CB				37	40	3	94	109	15	205	233	28
7	CB	114	127	13	59	71	12	137	138	1	509	534	25
8	DK				26	36	10	65	93	28	186	242	56
9	DM				24	34	10	26	80	54	122	199	77
10	ES				33	30	—3	55	73	18	215	232	17
11	FC	112	107	—5	49	56	7	112	133	21	465	492	27
12	GP	108	120	12	65	75	10	105	113	8	457	494	37
13	GB				9	31	22	5	61	56	78	180	102
14	GR				36	62	26	36	85	49	139	230	91
15	GJ	110	113	3	43	49	6	123	131	8	454	468	14
16	HJ				21	19	—2	48	42	—6	141	140	—1
17	HB				24	26	2	32	57	25	166	193	27
18	HC				51	59	8	109	121	12	228	255	27
19	HS				24	32	8	68	78	10	159	188	29
20	JR	112	124	12	68	75	7	131	139	8	494	539	45
21	LM	102	107	5	43	56	13	128	129	1	439	460	21
22	MD	107	103	—4	50	53	3	131	133	2	463	473	10
23	MW				21	32	11	24	69	45	107	186	79
24	PR	104	118	14	32	56	24	123	136	13	402	452	50
25	PD				36	46	10	84	107	23	191	232	41
26	PB				33	42	9	73	77	4	217	238	21
27	PW				40	49	9	60	91	31	215	238	23
28	RC				20	26	6	60	88	28	157	196	39
29	RR	111	118	7	50	58	8	66	87	21	414	455	41
30	SE				32	47	15	114	119	5	232	250	18
31	SG				32	47	15	79	85	6	191	217	26
32	SC				9	19	10	51	30	—21	116	106	—10
33	SJ				15	18	3	35	38	3	117	127	10
34	SJ				29	39	10	100	120	20	240	274	34
35	SH				31	42	11	40	59	19	139	184	45
36	SE				61	68	7	107	121	14	244	274	30
37	VP	112	127	15	64	69	5	127	144	17	488	538	50
38	WL	97	81	—16	22	33	11	32	27	—5	308	296	—12
39	WE	113	136	23	50	58	8	136	135	—1	478	530	52
40	WR				52	53	1	106	107	1	289	286	—3
41	WD				31	37	6	53	54	1	198	203	5
42	CA				22	27	5	51	75	24	135	172	37
43	YW				35	45	10	42	76	34	158	210	52
44	HB				48	61	13	119	136	17	248	283	35
45	HR	116	122	6	53	68	15	130	141	11	480	531	51
46	BJ	88	93	5	35	44	9	84	114	30	355	401	46

Control Area (35)

		Cores 1 & 2 (39)			Reading Readiness (53)			Cores 3 & 4 (61)			Core 5 Boys (45)			Core 5 Girls (45)			Core 6 (78)		
Name	S-B	Oct. '58	May '59	Gain	Oct. '58	May '59	Gain	Oct. '58	May '59	Gain	Oct. '58	May '59	Gain	Oct. '58	May '59	Gain	Oct. '58	May '59	Gain
1 BL	50	34	35	1				37	37	0				28	28	0	39	47	8
2 BJ	53	36	36	0				40	41	1	30	27	—3				42	46	4
3 BM	66	35	36	1	48	49	1	34	36	2									
4 BP	50	22	35	13															
5 CA	57	21	25	4	41	45	4												
6 CB	52	33	38	5				41	46	5									
7 DJ	70	39	39	0				47	49	2	35	37	2				62	57	—5
8 DK	72	26	31	5	37	49	12	32	33	1									
9 ES	63	38	35	—3	51	51	0	38	43	5									
10 FF	67	35	38	3				48	52	4				35	36	1	58	61	3
11 GJ	56	37	38	1				49	46	—3				34	31	—3	58	60	2
12 HJ	71	30	35	5	42	44	2												
13 HB	59	35	35	0	39	45	6	36	30	—6									
14 HC	71	34	35	1				34	40	6									
15 HS	50	30	36	6				37	42	5									
16 HL	54	22	18	—4	4	18	14												
17 HS	52	36	36	0				32	35	3	20	31	11				35	41	6
18 LM	67	38	39	1				43	43	0	29	31	2				56	55	—1
19 LB	57	35	39	4				44	40	—4	30	32	2				47	49	2
20 LC	75	38	38	0				40	47	7	27	37	10				55	59	4
21 MD	70	39	38	—1				45	45	0				36	39	3	55	62	7
22 MA	65	26	31	5				30	36	6	23	24	1				40	41	1
23 ME	64	33	38	5	43	47	4	36	35	—1									
24 PJ	73	31	34	3				42	36	—6									
25 PB	73	37	37	0	43	43	0	31	39	8									
26 PW	75	28	31	3	51	46	—5	36	21	—15									
27 PD	71	36	36	0				35	43	8									
28 PA	63	34	37	3	47	41	—6	44	44	0									
29 SC	62	25	22	—3	31	35	4												
30 SJ	71	30	27	—3	37	44	7												
31 SJ	55	34	31	—3	47	47	0	30	37	7									
32 TP	67	35	38	3	37	38	1												
33 WL	62	36	33	—3				44	38	—6	30	37	7				47	47	0
34 WR	69	36	38	2	49	49	0	46	39	—7									
35 WD	72	33	35	2	44	43	—1	37	34	—3									

		Cores 7 & 8 (162)			Mathematical Concepts (79)			Reading Achievement (145)			Total Score		
	Name	Oct. '58	May '59	Gain	Oct. '58	May '59	Gain	Oct. '58	May '59	Gain	Oct. '58	May '59	Gain
1	BL	90	118	28	37	31	—6	92	95	3	357	391	34
2	BJ	88	93	5	35	44	9	84	114	30	355	401	46
3	BM				28	33	5	80	102	22	225	256	31
4	BP										22	35	13
5	CA				22	27	5	51	75	24	135	172	37
6	CB				37	40	3	94	109	15	205	233	28
7	DJ	118	106	—12	54	57	3	69	46	—23	424	391	—33
8	DK				26	36	10	65	93	28	186	242	56
9	ES				33	30	—3	55	73	18	215	232	17
10	FF	112	108	—4	56	58	2	132	121	—11	476	474	—2
11	GJ	110	113	3	43	49	6	123	131	8	454	468	14
12	HJ				21	19	—2	48	42	—6	141	140	—1
13	HB				24	26	2	32	57	25	166	193	27
14	HC				51	59	8	109	121	12	228	255	27
15	HS				24	32	8	68	78	10	159	188	29
16	HL										26	36	10
17	HS	78	79	1	30	30	0	22	31	9	253	283	30
18	LM	102	107	5	43	56	13	128	129	1	439	460	21
19	LB	81	94	13	36	33	—3	20	31	11	293	318	25
20	LC	99	107	8	53	51	—2	57	64	7	369	403	34
21	MD	107	103	—4	50	53	3	131	133	2	463	473	10
22	MA	81	70	—11	34	33	—1	75	79	4	309	314	5
23	ME				29	31	2	88	89	1	229	240	11
24	PJ				38	49	11	103	117	14	214	236	22
25	PB				33	42	9	73	77	4	217	238	21
26	PW				40	49	9	60	91	31	215	238	23
27	PD				36	46	10	84	107	23	191	232	41
28	PA				29	26	—3				154	148	—6
29	SC				9	19	10	51	30	—21	116	106	—10
30	SJ				15	18	3	35	38	3	117	127	10
31	SJ				29	39	10	100	120	20	240	274	34
32	TP										72	76	4
33	WL	97	81	—16	22	33	11	32	27	—5	308	296	—12
34	WR				52	53	1	106	107	1	289	286	—3
35	WD				31	37	6	53	54	1	198	203	5

Experimental Area (37)

		Cores 1 & 2 (39)			Reading Readiness (53)			Cores 3 & 4 (61)			Core 5 Boys (45)			Core 5 Girls (45)			Core 6 (78)		
Name	S-B	Oct. '58	May '59	Gain	Oct. '58	May '59	Gain	Oct. '58	May '59	Gain	Oct. '58	May '59	Gain	Oct. '58	May '59	Gain	Oct. '58	May '59	Gain
1 BC	71	33	32	—1	39	39	0												
2 BP	66	39	39	0				49	50	1	33	39	6				56	65	9
3 BB	64	39	39	0				40	49	9									
4 BS	67	39	39	0				50	56	6				37	39	2	39	63	24
5 CE	62	38	39	1				46	52	6				39	37	—2	52	54	2
6 CJ	72	34	37	3	42	49	7												
7 CS	51	38	38	0				36	40	4	31	34	3				48	52	4
8 CR	56	37	37	0				43	47	4	38	36	—2				56	52	—4
9 CB	71	39	39	0				55	53	—2				42	43	1	63	63	0
10 DM	62	34	34	0	38	51	13												
11 FC	67	39	39	0				54	51	—3				37	41	4	62	65	3
12 GA	73	39	39	0				43	57	14	37	35	—2				68	65	—3
13 GP	72	38	39	1				49	50	1	36	34	—2				56	63	7
14 GB	71	29	39	10	35	49	14												
15 GR	71	33	35	2				34	48	14									
16 HB	58	37	39	2				44	47	3									
17 HR	66	35	39	4				52	56	4				35	40	5	59	65	6
18 HL	70	28	33	5	40	48	8												
19 HR	67	34	35	1				40	50	10									
20 JR	69	39	39	0				47	51	4	38	39	1				59	72	13
21 MW	61	30	35	5	32	50	18												
22 MM	71	38	39	1				42	52	10									
23 NJ	70	39	39	0				45	52	7	38	40	2				43	58	15
24 PR	64	38	37	—1				47	46	—1							58	59	1
25 PH	69	33	38	5				47	56	9				32	36	4	53	62	9
26 RC	60	35	37	2	42	45	3												
27 RR	67	38	39	1				50	52	2	37	38	1				62	63	1
28 SE	50	37	35	—2				49	49	0									
29 SG	58	37	37	0				43	48	5									
30 SH	55	32	37	5				36	46	10									
31 SE	62	38	38	0				38	47	9									
32 VP	73	39	39	0				52	49	—3				37	38	1	57	72	15
33 WK	66	31	36	5				43	50	7	32	44	12						
34 WD	72	36	37	1				42	49	7									
35 WE	72	39	39	0				46	53	7	37	41	4				57	68	11
36 YS	70	39	38	—1				40	50	10									
37 YW	70	35	38	3				46	51	5									

	Cores 7 & 8 (162)			Mathematical Concepts (79)			Reading Achievement (145)			Total Score		
Name	Oct. '58	May '59	Gain	Oct. '58	May '59	Gain	Oct. '58	May '59	Gain	Oct. '58	May '59	Gain
1 BC				15	22	7	7	52	45	94	145	51
2 BP	127	127	0	43	43	0	91	106	15	438	469	31
3 BB				42	54	12	72	100	28	193	242	49
4 BS	110	120	10	57	64	7	116	129	13	448	510	62
5 CE	99	99	0	29	37	8	121	121	0	424	439	15
6 CJ				25	29	4	50	87	37	151	202	51
7 CS	92	105	13	53	37	—16	71	88	17	369	394	25
8 CR	99	95	—4	28	40	12	130	128	—2	431	435	4
9 CB	114	127	13	59	71	12	137	138	1	509	534	25
10 DM				24	34	10	26	80	54	122	199	77
11 FC	112	107	—5	49	56	7	112	133	21	465	492	27
12 GA	115	114	—1	63	69	6	64	96	32	429	475	46
13 GP	108	120	12	65	75	10	105	113	8	457	494	37
14 GB				9	31	22	5	61	56	78	180	102
15 GR				36	62	26	36	85	49	139	230	91
16 HB				48	61	13	119	136	17	248	283	35
17 HR	116	122	6	53	68	15	130	141	11	480	531	51
18 HL				27	27	0	67	75	8	162	183	21
19 HR				38	47	9	105	115	10	217	247	30
20 JR	112	124	12	68	75	7	131	139	8	494	539	45
21 MW				21	32	11	24	69	45	107	186	79
22 MM				58	65	7	118	125	7	256	281	25
23 NJ	101	111	10	49	65	16	27	77	50	342	442	100
24 PR	104	118	14	32	56	24	123	136	13	402	452	50
25 PH	108	110	2	48	60	12	114	123	9	435	485	50
26 RC				20	26	6	60	88	28	157	196	39
27 RR	111	118	7	50	58	8	66	87	21	414	455	41
28 SE				32	47	15	114	119	5	232	250	18
29 SG				32	47	15	79	85	6	191	217	26
30 SH				31	42	11	40	59	19	139	184	45
31 SE				61	68	7	107	121	14	244	274	30
32 VP	112	127	15	64	69	5	127	144	17	488	538	50
33 WK				33	38	5	31	62	31	170	230	60
34 WD				29	42	13	94	119	25	201	247	46
35 WE	113	136	23	50	58	8	136	135	—1	478	530	52
36 YS				41	48	7	124	134	10	244	270	26
37 YW				35	45	10	42	76	34	158	210	52

20 Communities (72)

		Cores 1 & 2 (39)			Reading Readiness (53)			Cores 3 & 4 (61)			Core 5 Boys (45)			Core 5 Girls (45)			Core 6 (78)		
Name	S-B	Oct. '58	May '59	Gain	Oct. '58	May '59	Gain	Oct. '58	May '59	Gain	Oct. '58	May '59	Gain	Oct. '58	May '59	Gain	Oct. '58	May '59	Gain
1 BC	71	33	32	—1	39	39	0												
2 BL	50	34	35	1				37	37	0				28	28	0	39	47	8
3 BP	66	39	39	0				49	50	1	33	39	6				56	65	9
4 BB	64	39	39	0				40	49	9									
5 BS	67	39	39	0				50	56	6				37	39	2	39	63	24
6 BJ	53	36	36	0				40	41	1	30	27	—3				42	46	4
7 BM	66	35	36	1	48	49	1	34	36	2									
8 BP	50	22	35	13															
9 CE	62	38	39	1				46	52	6				39	37	—2	52	54	2
10 CJ	72	34	37	3	42	49	7												
11 CS	51	38	38	0				36	40	4	31	34	3				48	52	4
12 CA	57	21	25	4	41	45	4												
13 CB	52	33	38	5				41	46	5									
14 CR	56	37	37	0				43	47	4	38	36	—2				56	52	—4
15 CB	71	39	39	0				55	53	—2				42	43	1	63	63	0
16 DJ	70	39	39	0				47	49	2	35	37	2				62	57	—5
17 DK	72	26	31	5	37	49	12	32	33	1									
18 DM	62	34	34	0	38	51	13												
19 ES	63	38	35	—3	51	51	0	38	43	5									
20 FF	67	35	38	3				48	52	4				35	36	1	58	61	3
21 FC	67	39	39	0				54	51	—3				37	41	4	62	65	3
22 GA	73	39	39	0				43	57	14	37	35	—2				68	65	—3
23 GP	72	38	39	1				49	50	1	36	34	—2				56	63	7
24 GB	71	29	39	10	35	49	14												
25 GR	71	33	35	2				34	48	14									
26 GJ	56	37	38	1				49	46	—3				34	31	—3	58	60	2
27 HJ	71	30	35	5	42	44	2												
28 HB	59	35	35	0	39	45	6	36	30	—6									
29 HC	71	34	35	1				34	40	6									
30 HB	58	37	39	2				44	47	3									
31 HS	50	30	36	6				37	42	5									
32 HL	54	22	18	—4	4	18	14												
33 HS	52	36	36	0				32	35	3	20	31	11				35	41	6

20 Communities (72)

		Cores 1 & 2 (39)			Reading Readiness (53)			Cores 3 & 4 (61)			Core 5 Boys (45)			Core 5 Girls (45)			Core 6 (78)		
Name	S-B	Oct. '58	May '59	Gain	Oct. '58	May '59	Gain	Oct. '58	May '59	Gain	Oct. '58	May '59	Gain	Oct. '58	May '59	Gain	Oct. '58	May '59	Gain
34 HR	66	35	39	4				52	56	4				35	40	5	59	65	6
35 HL	70	28	33	5	40	48	8												
36 HR	67	34	35	1				40	50	10									
37 JR	69	39	39	0				47	51	4	38	39	1				59	72	13
38 LM	67	38	39	1				43	43	0	29	31	2				56	55	—1
39 LB	57	35	39	4				44	40	—4	30	32	2				47	49	2
40 LC	75	38	38	0				40	47	7	27	37	10				55	59	4
41 MD	70	39	38	—1				45	45	0				36	39	3	55	62	7
42 MA	65	26	31	5				30	36	6	23	24	1				40	41	1
43 MW	61	30	35	5	32	50	18												
44 ME	64	33	38	5	43	47	4	36	35	—1									
45 MM	71	38	39	1				42	52	10									
46 NJ	70	39	39	0				45	52	7	38	40	2				43	58	15
47 PJ	73	31	34	3				42	36	—6									
48 PR	64	38	37	—1				47	46	—1							58	59	1
49 PH	69	33	38	5				47	56	9				32	36	4	53	62	9
50 PB	73	37	37	0	43	43	0	31	39	8									
51 PW	75	28	31	3	51	46	—5	36	21	—15									
52 PD	71	36	36	0				35	43	8									
53 PA	63	34	37	3	47	41	—6	44	44	0									
54 RC	60	35	37	2	42	45	3												
55 RR	67	38	39	1				50	52	2	37	38	1				62	63	1
56 SE	50	37	35	—2				49	49	0									
57 SG	58	37	37	0				43	48	5									
58 SC	62	25	22	—3	31	35	4												
59 SJ	71	30	27	—3	37	44	7												
60 SJ	55	34	31	—3	47	47	0	30	37	7									
61 SH	55	32	37	5				36	46	10									
62 SE	62	38	38	0				38	47	9									
63 TP	67	35	38	3	37	38	1												
64 VP	73	39	39	0				52	49	—3				37	38	1	57	72	15
65 WK	66	31	36	5				43	50	7	32	44	12						
66 WL	62	36	33	—3				44	38	—6	30	37	7						
67 WD	72	36	37	1				42	49	7									
68 WE	72	39	39	0				46	53	7	37	41	4				57	68	11
69 WR	69	36	38	2	49	49	0	46	39	—7									
70 WD	72	33	35	2	44	43	—1	37	34	—3									
71 YS	70	39	38	—1				40	50	10									
72 YW	70	35	38	3				46	51	5									

Name	Cores 7 & 8 (162) Oct. '58	May '59	Gain	Mathematical Concepts (79) Oct. '58	May '59	Gain	Reading Achievement (145) Oct. '58	May '59	Gain	Total Score Oct. '58	May '59	Gain
1 BC				15	22	7	7	52	45	94	145	51
2 BL	90	118	28	37	31	—6	92	95	3	357	391	34
3 BP	127	127	0	43	43	0	91	106	15	438	469	31
4 BB				42	54	12	72	100	28	193	242	49
5 BS	110	120	10	57	64	7	116	129	13	448	510	62
6 BJ	88	93	5	35	44	9	84	114	30	355	401	46
7 BM				28	33	5	80	102	22	225	256	31
8 BP										22	35	13
9 CE	99	99	0	29	37	8	121	121	0	424	439	15
10 CJ				25	29	4	50	87	37	151	202	51
11 CS	92	105	13	53	37	—16	71	88	17	369	394	25
12 CA				22	27	5	51	75	24	135	172	37
13 CB				37	40	3	94	109	15	205	233	28
14 CR	99	95	—4	28	40	12	130	128	—2	431	435	4
15 CB	114	127	13	59	71	12	137	138	1	509	534	25
16 DJ	118	106	—12	54	57	3	69	46	—23	424	391	—33
17 DK				26	36	10	65	93	28	186	242	56
18 DM				24	34	10	26	80	54	122	199	77
19 ES				33	30	—3	55	73	18	215	232	17
20 FF	112	108	—4	56	58	2	132	121	—11	476	474	—2
21 FC	112	107	—5	49	56	7	112	133	21	465	492	27
22 GA	115	114	—1	63	69	6	64	96	32	429	475	46
23 GP	108	120	12	65	75	10	105	113	8	457	494	37
24 GB				9	31	22	5	61	56	78	180	102
25 GR				36	62	26	36	85	49	139	230	91
26 GJ	110	113	3	43	49	6	123	131	8	454	468	14
27 HJ				21	19	—2	48	42	—6	141	140	—1
28 HB				24	26	2	32	57	25	166	193	27
29 HC				51	59	8	109	121	12	228	255	27
30 HB				48	61	13	119	136	17	248	283	35
31 HS				24	32	8	68	78	10	159	188	29
32 HL										26	36	10
33 HS	78	79	1	30	30	0	22	31	9	253	283	30
34 HR	116	122	6	53	68	15	130	141	11	480	531	51
35 HL				27	27	0	67	75	8	162	183	21

	Cores 7 & 8 (162)			Mathematical Concepts (79)			Reading Achievement (145)			Total Score		
Name	Oct. '58	May '59	Gain	Oct. '58	May '59	Gain	Oct. '58	May '59	Gain	Oct. '58	May '59	Gain
36 HR				38	47	9	105	115	10	217	247	30
37 JR	112	124	12	68	75	7	131	139	8	494	539	45
38 LM	102	107	5	43	56	13	128	129	1	439	460	21
39 LB	81	94	13	36	33	—3	20	31	11	293	318	25
40 LC	99	107	8	53	51	—2	57	64	7	369	403	34
41 MD	107	103	—4	50	53	3	131	133	2	463	473	10
42 MA	81	70	—11	34	33	—1	75	79	4	309	314	5
43 MW				21	32	11	24	69	45	107	186	79
44 ME				29	31	2	88	89	1	229	240	11
45 MM				58	65	7	118	125	7	256	281	25
46 NJ	101	111	10	49	65	16	27	77	50	342	442	100
47 PJ				38	49	11	103	117	14	214	236	22
48 PR	104	118	14	32	56	24	123	136	13	402	452	50
49 PH	108	110	2	48	60	12	114	123	9	435	485	50
50 PB				33	42	9	73	77	4	217	238	21
51 PW				40	49	9	60	91	31	215	238	23
52 PD				36	46	10	84	107	23	191	232	41
53 PA				29	26	—3				154	148	—6
54 RC				20	26	6	60	88	28	157	196	39
55 RR	111	118	7	50	58	8	66	87	21	414	455	41
56 SE				32	47	15	114	119	5	232	250	18
57 SG				32	47	15	79	85	6	191	217	26
58 SC				9	19	10	51	30	—21	116	106	—10
59 SJ				15	18	3	35	38	3	117	127	10
60 SJ				29	39	10	100	120	20	240	274	34
61 SH				31	42	11	40	59	19	139	184	45
62 SE				61	68	7	107	121	14	244	274	30
63 TP										72	76	4
64 VP	112	127	15	64	69	5	127	144	17	488	538	50
65 WK				33	38	5	31	62	31	170	230	60
66 WL	97	81	—16	22	33	11	32	27	—5	308	296	—12
67 WD				29	42	13	94	119	25	201	247	46
68 WE	113	136	23	50	58	8	136	135	—1	478	530	52
69 WR				52	53	1	106	107	1	289	286	—3
70 WD				31	37	6	53	54	1	198	203	5
71 YS				41	48	7	124	134	10	244	270	26
72 YW				35	45	10	42	76	34	158	210	52

APPENDIX J

Adjustment Rating Scale and Individual Ratings

Adjustment Rating Scale

State of Maine
Dept. of Education

Date ....

Name of Pupil: .... Date of Birth: .... School .... Age .... Grade ....

To the Teacher: Please check only one position on each scale. If you feel that the position you have checked does not adequately describe the student, please feel free to use the reverse side of this sheet for additional comments.

OVER-ALL CLASSROOM WORK:

1	2	3	4	5	6	7	8
Creative in carrying out assignments	Works diligently and efficiently	Completes assigned work, but is capable of higher level of work	Tries, but unable to do work	Does only enough to satisfy minimum requirements	Wastes time, fails to complete work	Ignores assignments, though capable	Unable to do work (slow or disabled); does not try

OVER-ALL CLASSROOM BEHAVIOR:

1	2	3	4	5	6
Well-behaved	Infrequent minor infractions of discipline	Accepts regulations, occasionally violating minor rules	Usually well behaved, but violations are serious ones	Frequent infractions of regulations	Disturbing behavior, flagrant violations of discipline

ADJUSTMENT TO OTHER CHILDREN:

1	2	3	4	5	6	7
Accepted by students of both sexes	Accepted as member of the group by most fellow students	Has a few well adjusted friends	Has a few friends who are not well adjusted	Accepted by own group; rejected by others	Disregarded by most classmates, but not openly disliked	Generally disliked or rejected by group. Friends, if any, also unacceptable

SOCIAL PARTICIPATION:

1	2	3	4	5	6	7	8
Demonstrates positive leadership, seeks social contacts	Normal social participation	Does not seek contacts, but sought out by others	Converses with or cooperates with a few others	Leader in undesirable behavior	Follower in undesirable behavior	Shy and timid	Isolates self from group or responds only when approached by others

(Used by permission of William Itkin, Director
Cooperative Research Project
Chicago Board of Education)

Signature   Position

Adjustment Rating Scale

OVER-ALL CLASSROOM WORK

Control Area (19)

Initials	Sept.	June	Gain
BJ	6	4	2
BM	6	4	2
DK	5	5	0
ES	4	4	0
GJ	4	4	0
HJ	4	4	0
HB	4	8	—4
LM	4	4	0
MD	5	5	0
PB	5	4	1
PW	5	2	3
PD	5	2	3
PA	4	4	0
SC	4	4	0
SJ	4	4	0
SJ	5	4	1
WL	4	4	0
WR	4	6	—2
WD	6	4	2
Average gain			.4
Median gain			0

Experimental Area

Special Teacher Ratings (37)

Initials	Sept.	June	Gain
BC	6	3	3
BP	5	5	0
BB	6	4	2
BS	8	4	4
CE	4	4	0
CJ	8	5	3
CS	4	4	0
CR	4	8	—4
CB	3	3	0
DM	2	5	—3
FC	5	3	2
GA	6	8	—2
GP	2	5	—3
GB	6	5	1
GR	5	5	0
HB	2	3	—1
HR	3	2	1
HL	4	4	0
HR	8	4	4
JR	3	6	—3
MW	6	5	1
MM	7	3	4
NJ	6	6	0
PR	6	2	4
PH	4	4	0
RC	6	5	1
RR	8	5	3
SE	5	3	2
SG	5	6	—1
SH	5	4	1
SE	2	2	0
VP	2	2	0
WK	8	4	4
WD	4	8	—4
WE	3	2	1
YS	4	3	1
YW	3	5	—2
Average gain			.5
Median gain			1

Regular Teacher Ratings (36)

Initials	Sept.	June	Gain
BC	6	4	2
BP	4	4	0
BB	5	5	0
BS	6	4	2
CE	2	4	—2
CJ	4	4	0
CS	4	2	2
CR	(not in a regular classroom)		
CB	2	2	0
DM	4	8	—4
FC	4	4	0
GA	4	5	—1
GP	4	4	0
GB	4	6	—2
GR	4	4	0
HB	2	2	0
HR	4	5	—1
HL	4	4	0
HR	4	8	—4
JR	6	5	1
MW	8	6	2
MM	6	6	0
NJ	6	6	0
PR	4	4	0
PH	4	4	0
RC	2	2	0
RR	4	4	0
SE	6	2	4
SG	5	6	—1
SH	4	4	0
SE	4	4	0
VP	8	2	6
WK	8	8	0
WD	4	4	0
WE	5	5	0
YS	2	2	0
YW	4	2	2
Average gain			.2
Median gain			0

Adjustment Rating Scale

OVER-ALL CLASSROOM BEHAVIOR

Control Area (19)

Initials	Sept.	June	Gain
BJ	3	3	0
BM	3	3	0
DK	3	3	0
ES	1	1	0
GJ	1	1	0
HJ	1	1	0
HB	6	6	0
LM	1	1	0
MD	2	3	—1
PB	3	3	0
PW	1	1	0
PD	3	3	0
PA	3	3	0
SC	3	6	—3
SJ	3	3	0
SJ	3	3	0
WL	1	1	0
WR	3	5	—2
WD	2	1	1
Average gain			—.3
Median gain			0

Experimental Area

Special Teacher Ratings (37)

Initials	Sept.	June	Gain
BC	5	2	3
BP	1	1	0
BB	5	2	3
BS	1	3	—2
CE	1	1	0
CJ	2	2	0
CS	1	1	0
CR	3	3	0
CB	1	1	0
DM	1	1	0
FC	2	1	1
GA	6	6	0
GP	1	2	—1
GB	5	3	2
GR	3	1	2
HB	1	1	0
HR	1	1	0
HL	3	1	2
HR	3	2	1
JR	5	5	0
MW	3	1	2
MM	2	2	0
NJ	3	1	2
PR	2	1	1
PH	1	1	0
RC	5	3	2
RR	2	2	0
SE	3	1	2
SG	3	3	0
SH	3	2	1
SE	1	1	0
VP	1	1	0
WK	5	2	3
WD	5	2	3
WE	1	1	0
YS	1	1	0
YW	3	1	2
Average gain			.7
Median gain			0

Regular Teacher Ratings (36)

Initials	Sept.	June	Gain
BC	3	3	0
BP	1	1	0
BB	3	5	—2
BS	3	1	2
CE	1	1	0
CJ	1	1	0
CS	3	1	2
CR	(not in regular classroom)		
CB	1	1	0
DM	1	3	—2
FC	1	1	0
GA	6	5	1
GP	1	1	0
GB	6	3	3
GR	3	3	0
HB	1	1	0
HR	1	1	0
HL	1	1	0
HR	1	1	0
JR	3	3	0
MW	1	1	0
MM	3	3	0
NJ	2	1	1
PR	3	1	2
PH	1	1	0
RC	5	5	0
RR	2	1	1
SE	1	1	0
SG	2	5	—3
SH	3	3	0
SE	1	1	0
VP	1	1	0
WK	2	3	—1
WD	2	3	—1
WE	3	1	2
YS	1	1	0
YW	1	1	0
Average gain			.1
Median gain			0

Adjustment Rating Scale

ADJUSTMENT TO OTHER CHILDREN

Control Area (19)

Initials	Sept.	June	Gain
BJ	2	2	0
BM	2	2	0
DK	2	2	0
ES	1	1	0
GJ	6	6	0
HJ	2	2	0
HB	4	4	0
LM	6	6	0
MD	5	6	—1
PB	2	2	0
PW	1	1	0
PD	2	2	0
PA	1	2	—1
SC	7	7	0
SJ	6	6	0
SJ	4	6	—2
WL	2	1	1
WR	5	2	3
WD	6	2	4
Average gain			.2
Median gain			0

Experimental Area

Special Teacher Ratings (37)

Initials	Sept.	June	Gain
BC	1	1	0
BP	1	1	0
BB	2	2	0
BS	2	1	1
CE	5	2	3
CJ	5	2	3
CS	2	1	1
CR	6	6	0
CB	1	1	0
DM	1	2	—1
FC	3	2	1
GA	6	6	0
GP	1	1	0
GB	6	5	1
GR	5	3	2
HB	1	1	0
HR	1	1	0
HL	5	5	0
HR	6	4	2
JR	1	3	—2
MW	3	2	1
MM	5	1	4
NJ	6	2	4
PR	2	1	1
PH	6	6	0
RC	5	3	2
RR	6	3	3
SE	2	2	0
SG	2	6	—4
SH	5	2	3
SE	2	3	—1
VP	1	1	0
WK	6	5	1
WD	5	2	3
WE	2	1	1
YS	6	2	4
YW	2	1	1
Average gain			.9
Median gain			1

Regular Teacher Ratings (36)

Initials	Sept.	June	Gain
BC	1	1	0
BP	5	1	4
BB	2	2	0
BS	2	2	0
CE	3	4	—1
CJ	2	4	—2
CS	2	2	0
CR	(not in regular classroom)		
CB	3	3	0
DM	1	1	0
FC	2	3	—1
GA	4	6	—2
GP	2	2	0
GB	7	6	1
GR	4	4	0
HB	1	1	0
HR	2	1	1
HL	6	6	0
HR	1	2	—1
JR	4	4	0
MW	3	2	1
MM	1	1	0
NJ	6	6	0
PR	2	2	0
PH	6	6	0
RC	2	1	1
RR	6	6	0
SE	6	6	0
SG	7	6	1
SH	1	1	0
SE	6	2	4
VP	2	1	1
WK	6	6	0
WD	2	2	0
WE	7	2	5
YS	2	1	1
YW	1	1	0
Average gain			.4
Median gain			0

Adjustment Rating Scale

SOCIAL PARTICIPATION

Control Area (19)

Initials	Sept.	June	Gain
BJ	4	2	2
BM	4	2	2
DK	4	4	0
ES	7	7	0
GJ	8	4	4
HJ	7	7	0
HB	6	5	1
LM	8	8	0
MD	4	2	2
PB	2	2	0
PW	2	1	1
PD	5	5	0
PA	2	4	—2
SC	6	8	—2
SJ	4	4	0
SJ	4	4	0
WL	8	7	1
WR	4	6	—2
WD	4	2	2
Average gain			.5
Median gain			1

Experimental Area

Special Teacher Ratings (37)				Regular Teacher Ratings (36)			
Initials	Sept.	June	Gain	Initials	Sept.	June	Gain
BC	2	2	0	BC	2	2	0
BP	2	2	0	BP	4	2	2
BB	6	2	4	BB	2	2	0
BS	2	2	0	BS	2	4	—2
CE	7	3	4	CE	8	4	4
CJ	8	2	6	CJ	4	4	0
CS	2	2	0	CS	7	2	5
CR	3	6	—3	CR	(not in regular classroom)		
CB	2	2	0	CB	4	4	0
DM	2	2	0	DM	7	2	5
FC	4	2	2	FC	7	4	3
GA	5	5	0	GA	6	5	1
GP	2	2	0	GP	7	2	5
GB	5	7	—2	GB	3	4	—1
GR	4	4	0	GR	4	4	0
HB	2	2	0	HB	2	2	0
HR	2	2	0	HR	2	2	0
HL	8	7	1	HL	2	4	—2
HR	8	8	0	HR	8	8	0
JR	2	4	—2	JR	4	4	0
MW	4	2	2	MW	8	2	6
MM	3	2	1	MM	4	2	2
NJ	4	8	—4	NJ	8	8	0
PR	2	2	0	PR	2	2	0
PH	8	4	4	PH	8	7	1
RC	4	4	0	RC	2	2	0
RR	7	4	3	RR	8	8	0
SE	4	2	2	SE	8	4	4
SG	4	4	0	SG	8	4	4
SH	4	2	2	SH	4	4	0
SE	7	4	3	SE	4	7	—3
VP	2	2	0	VP	2	2	0
WK	8	6	2	WK	4	4	0
WD	3	2	1	WD	7	7	0
WE	7	2	5	WE	6	4	2
YS	3	4	—1	YS	7	2	5
YW	4	2	2	YW	2	2	0
Average gain			.9	Average gain			1.1
Median gain			0	Median gain			0

APPENDIX K

Individual Results on Dolch Basic Vocabulary Cards, 1958 and 1959

220 words

	Words Correct		
	Oct.	May	Gain
BC	10	32	22
DM	48	157	109
HB	204	220	16
GP	203	218	15
JR	136	191	55
CB	205	220	15
RC	107	196	89
RR	7	58	51
CS	77	148	71
PR	127	220	93
VP	214	220	6
MW	0	64	64
YW	19	88	69
WE	215	220	5
SH	29	58	29
CJ	17	155	138
SG	76	182	106
SE	189	219	30
SE	130	217	87
GB	5	10	5
GR	10	45	35
BP	191	203	12
FC	197	220	23
HR	200	220	20

APPENDIX L

Daily Attendance 1957-58
1958-59

Western Control

	57-58	58-59	Gain
BL	133	171	38
BP	162	179	17
DJ	163	159½	—3½
*FF	not in school	176	
HL	92	130	38
HS	173	173	0
LB	109	170	61
LC	107	173	67
MA	182	180	—2
ME	177	176	—1
PJ	169	177½	8½
PA	171	176	5
*TP	13	180	
	Entered 5/26/58		

*These individuals have been omitted in figuring averages

Western Experimental

	57-58	58-59	Gain
BB	179	163	—16
BS	160	167	7
CE	168	178½	10½
*CR	not in school	14	
GA	162	180	18
HL	150	150	0
HR	152	164	12
MM	162	172½	10½
NJ	169	163	—6
PH	168	158	—10
WK	176	165½	—10½
WD	177	173	—4
YS	166	175	9

Central Control

	57-58	58-59	Gain
BJ	173	169½	—3½
BM	176	178½	2½
CA	180	180	0
CB	169½	165	—4½
DK	175	178	3
ES	171	171½	½
GJ	158½	148½	—10
HJ	170	177	7
HB	173	179	6
HC	156½	160	3½
HS	170	174	4
LM	173	142½	—30½
MD	107½	143	35½
*PD	28	175	
	Entered 5/5/58		
PB	166	170	4
PW	175	172	—3
SC	179	176	—3
SJ	159	174	15
SJ	177	177	0
WL	160	162	2
*WR	43	175	
	Entered 4/7/58		
WD	177	177	0

Central Experimental

	57-58	58-59	Gain
BC	174	176	2
BP	173½	180	6½
CJ	171	178	7
CS	159½	180	20½
CB	164½	175	10½
DM	128	180	52
FC	148	162½	14½
GP	173½	172	—1½
GB	67	100	33
GR	114	133	19
HB	165	142	—23
HR	150	139	—11
JR	169	169	0
MW	157	179	22
PR	176	174	—2
RC	113	171	58
RR	57	139	82
SE	180	180	0
SG	180	179	—1
SH	179½	178	—1½
SE	163½	173½	10
VP	179	179	0
WE	161	174	13
YW	104	159	55

APPENDIX M

State of Maine
DEPARTMENT OF HEALTH AND WELFARE
Augusta

Dean Fisher, M. D.
Commissioner

Division of Child Welfare
185 North Main Street
Brewer, Maine

April 6, 1959

Mrs. Isabelle Bryant
41 High Street
Newport, Maine

Dear Mrs. Bryant:

I just wanted to let you know how pleased I am about Mrs. ....'s new attitude toward .... It has certainly come about as a result of the work you have done with her.

A short time ago, I visited the .... home and found Mrs. .... enthused and proud about ....'s accomplishments. We spent much time looking at the pot holders and the hooked rug. Mrs. .... seemed to speak of .... with respect and understanding. I was terribly pleased and hope that she will be able to continue. She certainly could never have gotten this far without your help and your sincere interest in ....

I did want you to know about this, but hope that we will see each other personally soon. Our staff enjoyed your visit immensely and was extremely interested in hearing about your work with the retarded child.

Sincerely yours,

Esther Cohen (Mrs.)
Child Welfare Worker

EC/lg

APPENDIX N

Publicity

Kennebec Journal — Augusta, Maine
    Feb. 28, 1958 Project for Retarded Children Slated for Maine's Rural Towns
    March 25, 1958 Maine Will Be First to Try Circuit Rider Approach to Teaching Mentally Retarded
    December 3, 1958 Family Fights Back After Tragic Fire Fatal to Two

Lewiston Daily Sun — Lewiston, Maine
    April 3, 1958 Ruth Pennell Granted Leave to Work on New State Project

Portland Sunday Telegram — Portland, Maine
    August 17, 1958 20 Towns Will Make Study to Benefit Retarded Pupils
    April 26, 1959 Teacher Uses Grocery Ads as Textbooks to Test Retarded for Research Project

Maine Schools — Augusta, Maine
    January, 1959 "Development of a Program for Educable Mentally Retarded Children in Rural Schools"

California Test Bureau — Los Angeles, California
    March, 1959 Request to reprint above article
    April, 1959 Reprint of above article for research abstract mailing list

U. S. Dept. of Health, Education and Welfare
    Research Relating to Children, Bulletin #8
    Projects Under Contract July 1, 1956 — December 31, 1958
    Cooperative Research Projects Fiscal 1958

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